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# PSYCHOLOGICAL ABSTRACTS

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# PSYCHOLOGICAL ABSTRACTS

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## GENERAL

5421. Anderson, L. E. A method for measuring sweat output from skin surfaces. *Science*, 1935, 82, 233-234.—R. Goldman (Clark).
5422. [Anon.] L'attività della sezione Fiorentina della Società Italiana di Psicologia. (Proceedings of the Florentine section of the Italian Society of Psychology.) *Riv. Psicol. norm. patol.*, 1935, 31, 129-131.—T. M. Abel (Sarah Lawrence).
5423. [Anon.] Prof. Dr. C. G. Jung zum 60. Geburtstag. (To Prof. Jung on his sixtieth birthday.) *Zbl. Psychother.*, 1935, 8, 145-146.—This tribute to Jung on his sixtieth birthday (July 26, 1935) contains an appreciation and a short biography, accompanied by a full-page portrait. His break with the Freudian theory and the resultant *Transformations and Symbols of the Libido* (1913) mark perhaps the greatest accomplishment of his career. Among his activities in recent years are his visits to Arizona and New Mexico (1924-25) and to British East Africa (1925-26) to study primitive psychology. In 1933 he accepted the presidency of the Internationalen Allgemeinen Ärztlichen Gesellschaft für Psychotherapie and the editorship of the *Zentralblatt für Psychotherapie*, in order to help psychotherapy, which was gravely menaced in its struggle for existence, and to preserve its international connections as far as possible. In 1935 he founded the Schweizerische Gesellschaft für praktische Psychologie as the Swiss national group in the above international Society.—M. E. Morse (Baltimore).
5424. Artman, J. M. [Ed.] **Character**. Chicago: Religious Education Association. Vol. 1, No. 1, 1934. Bimonthly. \$1.00 per year.—R. R. Willoughby (Clark).
5425. Baum, M. William James and psychical research. *J. abnorm. soc. Psychol.*, 1935, 30, 111-118.—A close study of the numerous contributions which James made to psychical research reveals two facts: he undertook the study of psychical phenomena because they represented a part of human experience which, although treasured intrinsically, remained the most despised scientifically; he likewise believed that only a true scientific attitude and method were capable of resolving the mystery. The frankly hypothetical character of the assertion of his own unproved beliefs, coupled with the integrity of the attitude and method which he always employed in this field of research, is commendable. Had his interest been purely sentimental, he would have leaped to embrace any evidence or dogmatic revelations which promised to assuage his spiritual thirst.—C. H. Johnson (Boston Psychopathic Hospital).
5426. Bena, E. Chronaximetru, přístroj k buzení pravoúhlých proudových nárazů. (The chronaxime-
- ter, an apparatus for precise observation of action currents in waking.) *Rev. Neurol. Psychiat., Praha*, 1933, 30, No. 7, 166-178.—R. R. Willoughby (Clark).
5427. Bernard, L. L. Boris Sidis. *Encycl. soc. Sci.*, 1934, 14, 48-49.—L. A. Riggs (Clark).
5428. Bischler, W. Tâches et utilité de la psychologie. (The tasks and the value of psychology.) *Riv. Psicol. norm. patol.*, 1935, 31, 126-128.—T. M. Abel (Sarah Lawrence).
5429. Boring, E. G. Edward Bradford Titchener. *Encycl. soc. Sci.*, 1934, 14, 639-640.—L. A. Riggs (Clark).
5430. Brown, C. W., & Henry, F. M. The central nervous mechanism for emotional responses. III. A combination head-holder and goniometer-manipulator for controlling movements of a point electrode within the brain. *J. comp. Psychol.*, 1935, 20, 53-58.—A detailed description of the apparatus and of the method of applying it is given.—N. L. Munn (Pittsburgh).
5431. Bühler, C. Wilhelm Thierry Preyer. *Encycl. soc. Sci.*, 1934, 12, 349-350.—L. A. Riggs (Clark).
5432. Cohn, S. Das Leben als Synusie und seine Folgen für den Zusammenhang von Tuberkulose und Geisteskrankheiten. (Life as synusia and its consequences for the connection between tuberculosis and mental disease.) *Fortschr. Med.*, 1930, 48, 1-11.—Synusia means the living together of various organisms. The concept includes both parasitism and symbiosis. The participants of the synusia are called "synons." Life in synusia means a higher unity which is more than the life of the single synons. Constitution, disposition, disease, etc., are attributes of the synusia and not of the synons. The tubercle bacillus is one of the synons associated with the human organism, which becomes pathological by a change in the synusistic equilibrium. The author argues that mental diseases are the neurotropic form of tuberculosis.—S. Cohn (Bonn).
5433. Crane, G. W. **Psychology applied**. (2nd ed.) Chicago: Northwestern Univ. Press, 1935. Pp. 586. \$4.00.—R. R. Willoughby (Clark).
5434. D'Agostino, V. Locuzioni cesarieane relative al mondo dello spirito. (Caesar's phrases pertaining to the psychic world.) *Arch. Ital. Psicol.*, 1935, 13, 39-56.—The author reviews Caesar's expressions in his two books *De Bello Gallico* and *De Bello Civilis*, which may constitute his psychological vocabulary, inasmuch as some phrases pertain to the sentiments and passions of the human soul, and others, more numerous, pertain to the realm of the will. The study of the passages in which these expressions recur proves Caesar's many-sided talent as a man and as a writer, the predominance of the volitional factor, the serene objectivity of his style, and his supreme

art in delineating psychological situations.—R. E. Schwarz (V. A. Facility, Northampton, Mass.)

5435. D'Allonne, G. R. Contribution à une psychologie nouvelle. *Scientia, Bologna*, 1935, 58, 101-108.—The study of apperception combined with planned formulation, and of what makes up these two, leads to paradoxical and surprising statements. It responds to the actual needs of the new dynamic psychology, which is built on the ruins of associationism, establishing the conflict of the methods of dynamic psychology and associationism and the triumph of dynamics. It opposes a criticism of schematic formulation which is neither metaphysical, negative, nor non-productive. It enriches dynamics with contributions which interest all parts of psychology, human and animal, normal and pathological.—M. Gifford (Jamaica Plain, Mass.)

5436. Duranty, W. The international congress of physiology in Leningrad. *Science*, 1935, 82, 153-155.—The accumulating knowledge regarding conditioned reflexes that has been acquired by experiments upon animals is, according to Pavlov, becoming applicable to human beings, especially the abnormal. W. B. Cannon discoursed on the need for science and scientists to be aided rather than controlled by political forces. The advantages of a centralized state-supported system of scientific research are discussed.—R. Goldman (Clark).

5437. Frank, L. K. Structure, function, and growth. *Phil. Sci.*, 1935, 2, 210-235.—The author escapes the difficulty of reconciling a dynamically functioning organism with a mechanistic structure by denying that these aspects ever should have been separated in our thinking. "Every existent (such as an organism) may be approached as a space-time configuration. . . . The problem of structure, organization, or form is the problem of spatial configuration or sequence, while the problem of function, process, or activity is the problem of temporal duration or sequence. . . . A structure is a persistent function, while a function is a series of changing structures." We are thus working in a four-dimensional universe, three of which dimensions are spatial and the other temporal. "An organism exists as a space-time configuration which functions as a series of spatial deformations occurring in sequence for a period of time." The functions of glands, of muscles, and of nervous impulses are explained in terms of the interaction of "fields" of the different space-time configurations constituting the organism. Thus the problem of nervous impulse is brought into line with the problem of light transmission and other energy transformations, while the doctrine of interacting "fields" squares with the basic principles of Gestalt psychology.—C. C. Peters (Penn State).

5438. Fröschels, E. Zur Leib-Seele-Frage. (The mind-body problem.) *Z. ges. Neurol. Psychiat.*, 1935, 152, 77-83.—The writer discusses various classical solutions of the mind-body problem and attempts to show their lack of value to neurology and psychiatry. Much confusion has resulted from failure to distinguish between causes and conditions

of mental activity. Will, which is a kind of movement and thus cannot be reduced to passive ideas, offers peculiar difficulties, especially from the point of view of localization of function. Normal or abnormal will may be found with either normal or abnormal soma.—C. W. Fox (Rochester).

5439. Gilhousen, H. C. The American Association for the Advancement of Science. The Los Angeles meeting of the Pacific Division. Western Psychological Association. *Science*, 1935, 82, 266.—R. R. Willoughby (Clark).

5440. Goldenweiser, A. W. H. R. Rivers. *Encycl. soc. Sci.*, 1934, 13, 398-399.—L. A. Riggs (Clark).

5441. Hammond, L. M. Plato on scientific measurement and the social sciences. *Phil. Rev.*, 1935, 44, 435-447.—Measurement today usually signifies a set of operations performed with measuring rods or other instruments upon a given set of entities to render possible their approximate identification with a set of number values. The so-called social sciences, captivated by the tidy systematic results of the more exact sciences, have also sought to bring their complex and recalcitrant data under the category of quantity. Measurement becomes reduced to a random gathering of data, having no specific relevance to anything, where instruments have taken the place of ideas. In Greek philosophy, *πέρας*, or measure, meant also the finite, the determinate. By illustrations from the Pythagorean theory of music and Plato's theory of correspondence between the individual and the state, the author shows that there are three levels of measurement: (1) passing from things to the additive properties involved, (2) the proportion expressing the intensive magnitude, which determines a functional interdependence between the quantitative magnitudes, and (3) arriving at the universal form or idea embodied in that specific proportion. From this point of view, the entities to be measured are not given as direct sense experience.—M. F. Martin (West Springfield, Mass.)

5442. Hill, L. A simple method of measuring the air-way of the nose. *J. Physiol.*, 1935, 85, 19P-20P.—M. A. Rubin (Clark).

5443. Hoisington, L. B. *Psychology: an elementary text*. New York: Macmillan, 1935. Pp. 557. \$2.50.—The author emphasizes the following principles: "integrated sensory-motor responses; development through functioning; and determination, both internal and external, in terms of the total state of integration of the organism at the moment." Mind is not regarded as consciousness or awareness but as "integrated sensory-motor responses and psychology is the study of the nature and origin of these responses, their integration into patterns, and their functioning in our daily lives." The text is divided into 40 chapters under the following major topics: man and mind as a part of nature; man as a physiological organism; man and machine; man and society; how the organism functions; contact with the outside world; internal response patterns; evaluative responses; development of response; retention of response patterns; use of response patterns; im-

portant determinations; special response conditions; and personality factors.—*W. S. Hunter* (Clark).

5444. Jalota, S. On Gestalt psychology. *Indian J. Psychol.*, 1934, 9, No. 3-4, 57-67.—After a discussion of the Gestalt viewpoint, it is concluded that "The Gestalt hypothesis is neither a system nor an element, but an attitude . . . [it] is only a suggestive and helpful point of view for the consideration of certain behavior problems. But it is not the last word, since it necessarily leaves very large portions of the behavior problems unsolved. Hence . . . a combination with the hypothesis of teleo-mechanical parallelism will prove highly beneficial."—*H. Schlossberg* (Brown).

5445. Jastrow, J. Morton Prince. *Encycl. soc. Sci.*, 1934, 12, 405.—*L. A. Riggs* (Clark).

5446. Jastrow, J. Psychology. *Encycl. soc. Sci.*, 1934, 12, 588-596.—Early psychological thought evolved from philosophy—the psyche of the Greeks, British associationism, and German philosophy. Modern psychology has sprung rather from the experimental method and the principle of evolution. The most recent trend is organismic, as expressed in personalist and Gestaltist theories. Psychology, basic to the social sciences, is less unified than other basic sciences. Yet "In contrast to the irregular and handicapped course represented in the historical development, the present outlook is clear and unhampered."—*L. A. Riggs* (Clark).

5447. Jastrow, J. The current chaos in psychology: and the way out via Psyche's design for living. *Sci. Mon., N. Y.*, 1935, 41, 97-110.—Behaviorism, psychoanalysis, and Gestaltism are critically handled; and a "service" view of the neural apparatus is proposed as a foundation for a naturalistic psychology.—*J. F. Dashiell* (North Carolina).

5448. Jesinghaus, C. El XV Congreso de Psicología en Tuebingen. (The XV Congress of Psychology in Tübingen.) *Arch. argent. Psicol. norm. pat.*, 1935, 2, 20-24.—A brief review and commentary on some of the papers read at the congress. Those of F. Krueger, G. Wundt, Jaensch, and Giese are considered as they bear upon the socio-psychological problems of the Argentine.—*R. M. Bellows* (Ohio State).

5449. Josey, C. C. The self in the light of Gestalt psychology. *J. abnorm. soc. Psychol.*, 1935, 30, 47-56.—Difficulty in dividing the psychological whole into the self and environment arises from the fact that it contains more than the self and environment. In addition, it contains relations and qualities which emerge as a result of relations, many of which contribute much to the nature of the self. A given man may be a son, a parent, a teacher, a leader, wealthy and popular. The self may be regarded as an assimilative system that feeds and grows upon its experiences, which in turn are determined by the whole of which it is a part. This makes intelligible the effect of environment on the formation of character and personality.—*C. H. Johnson* (Boston Psychopathic Hospital).

5450. Kempf, E. J. Physiology of attitude—emergence of ego-organization. *Med. Rec., N. Y.*, 1935, 142, 173-174.—(Eighth installment.) The author discusses the efficacy of the pain-pleasure-pain principle in behavior, pointing out that malfunction gives rise to unpleasant stimuli which excite a tension giving rise to a need to relieve the functional condition. If the pain source is external, avoidant postures and attitudes are stimulated. Thus, postures or attitudes may be conditioned to associated distant stimuli. Relief of pain leads to pleasure. Thus pleasure may become dependent upon potentially painful stimuli. Pleasure stimuli function in ways acquisitive of prolongation or repetition of the pleasurable experience. Loss of pleasure excites painful distonias and dysrhythmic reactions. Hence pleasurable functioning serves as a guide for the counterbalancing of acquisitive behavior because of the conditioning effects of the immediate potentiality of painful functioning. These points are discussed at length.—*M. H. Erickson* (Eloise Hospital).

5451. Kroh, O. Das physiognomische Verstehen in seiner allgemeinpsychologischen Bedeutung. (The physiognomic understanding and its significance for general psychology.) *Neue psychol. Stud.*, 1934, 12, Heft 2, 23-40.—The predominance of the immediate physiognomic understanding in the mentality of children, of primitives and of psychotics, is demonstrated, and the role this understanding plays in the fully developed mentality of the adult is pointed out. The author believes that the insight into the basic similarity of factors operating on different levels of psychic life can effect a rapprochement between genetic psychology and the *geisteswissenschaftliche* psychology.—*E. Hanfmann* (Worcester State Hospital).

5452. Litt, T. Strukturpsychologisches bei Hegel. (Structural psychology in Hegel's work.) *Neue psychol. Stud.*, 1934, 12, Heft 2, 41-50.—There existed a decided enmity between Hegel's philosophy and the psychology of his time, yet many of his opinions, especially his stressing of the viewpoint of totality, have foreshadowed the later development of structural psychology. This agreement is demonstrated by the example of his treatment of the mind-body problem: mind and body are conceived not as two separate entities but as forming an inseparable unity.—*E. Hanfmann* (Worcester State Hospital).

5453. Müller-Freienfels, R. The evolution of modern psychology. (Trans. by W. B. Wolfe.) New Haven: Yale Univ. Press, 1935. Pp. xvi + 513. \$5.00.—A summary of the principal currents in psychology during the nineteenth and twentieth centuries, with some references to American work but chiefly from the European viewpoint; a preliminary chapter presents the main trends prior to the nineteenth century. There are six parts, entitled: how psychology became conscious of consciousness; physiopsychology and psychophysiology; the psychology of action and conduct; the psychology with "soul"; the psychology of the unconscious; the psychology of superindividual psychic life. An

introductory section presents the plan and point of view both of the book and of the science; a conclusion considers the existence of the soul; an appendix treats the development of parapsychology; there are a bibliography of 15 pages and name and subject indexes.—R. R. Willoughby (Clark).

5454. Northfield, W. *What life has taught me.* Wisbech: Fenland Press, 1935. Pp. 122. 3/6.—F. C. Bartlett (Cambridge, England).

5455. Pichon, E. *Eugénie Sokolnicka (14 juin 1884-19 mai 1934).* (Eugénie Sokolnicka, June 14, 1884-May 19, 1934.) *Rev. franç. Psychanal.*, 1934, 7, 590-603.—An obituary of Eugénie Sokolnicka describing her work in introducing psychoanalysis into France and in forming the Psychoanalytic Society of Paris.—J. McV. Hunt (Worcester State Hospital).

5456. Piéron, H. *Chronoptoscope for measuring times of reaction in a psychotechnic mark.* *Indian J. Psychol.*, 1934, 9, No. 1-2, 79-88.—A translation, by S. N. Mitra, of a description of Pieron's simple fall chronoscope, and its use.—H. Schlosberg (Brown).

5457. Ponzo, M. *La figura di Sante De Sanctis nella scienza e nella vita.* (The figure of Sante De Sanctis in science and in life.) *Arch. ital. Psicol.*, 1935, 13, 3-8.—A eulogy of the eminent psychologist and psychiatrist DeSanctis, just passed away at the age of 73, and a brief review of his work.—R. E. Schwarz (V. A. Facility, Northampton, Mass.).

5458. Ray, G. B. *A simple type of ergometer.* *Science*, 1935, 82, 232-233.—Description of the construction of the ergometer. The subject lies in a supine position with each foot in a stirrup formed by a loop of cord which passes over two pulleys.—R. Goldman (Clark).

5459. Richards, O. W. *A terminology proposed for motion picture films.* *Science*, 1935, 82, 102-103.—It is suggested that in order to have consistency and eliminate confusion in terminology the following expressions be used universally: "tachykinetic" to describe a motion picture film that is projected on the screen at a faster rate than the film was taken in the camera; "isokinetic" to describe a projection at the same rate as the film was taken, i.e., when no change in time rate occurs and "bradykinetic" to denote any film projected at a slower rate than was used in the making of the film.—R. Goldman (Clark).

5460. Roback, A. A. *Hajim Steinalth.* *Encycl. soc. Sci.*, 1934, 14, 384-385.—L. A. Riggs (Clark).

5461. Ryan, M. A. *Motion-picture speed nomenclature.* *Science*, 1935, 82, 302.—The nomenclature proposed by Richards in *Science*, 1935, 82, 102-103, is considered confusing. Instead, it is suggested that "if the number of frames per second projected be placed over the number of frames per second photographed and the word 'actual-speed' be added, an expression will result that will be self-explanatory and give all the desired information at a glance." For example, in a 16/8 actual-speed film, everything moves in the projected picture at twice the actual speed.—R. Goldman (Clark).

5462. Taylor, W. S. *Philippe Pinel.* *Encycl. soc. Sci.*, 1934, 12, 135.—L. A. Riggs (Clark).

5463. Tolman, E. C. *Psychology versus immediate experience.* *Phil. Sci.*, 1935, 2, 356-380.—It is the business of philosophy, poetry, and common sense to deal with immediate experience; psychology and physics deal only with rules and equations about sets of logical constructs. A behavioristic psychology seeks merely to write the form of the function  $f_1$  which connects behavior as a dependent variable with the independent variables stimulus, heredity, training, and physiological disequilibria. There can be two different types of behaviorism: "molecular," which tries to work out in detailed neurological and glandular terms the variables intervening between behavior and the variables upon which it depends; and "molar," which works these out on a more macroscopic level in the guise of "behavior readinesses." These are both legitimate and complementary. It is the "molar" type to which the author undertakes in this article to make some contributions by analysis of these "behavior readinesses."—C. C. Peters (Penn State).

5464. Várkonyi, H. *A fejlődésiéléktani rendszerek.* (Developmental systems.) *Mag. psychol. Szle*, 1934, 7, No. 3/4, 3-22.—The importance of concepts used in developmental psychology (differentiation, concentration, maturation, learning) depends on the closeness of their connection with biological laws. The author maintains that (1) an analysis of the living individual leads directly to a concept of his mental life; (2) the interpretation of the goal of human life, in a biological sense, explains the developmental process; (3) fundamental concepts of development are: maturation, learning, differentiation, concentration, which are organizational laws of consciousness; external influences also play a part in this connection; (4) the phases of development should be derived from a study of the goals of life; Charlotte Bühler's phases are too artificial and constructive to be true; (5) individual mental functions have their own developmental laws.—H. Beaumont (Kentucky).

5465. Vierkandt, A. *Wilhelm Max Wundt.* *Encycl. soc. Sci.*, 1935, 15, 506.—L. A. Riggs (Clark).

5466. Wente, E. C. *Acoustical instruments.* *J. acoust. Soc. Amer.*, 1935, 7, 1-15.—This paper includes a brief survey of such mechanical instruments as are still of interest in connection with problems in audition and acoustics, but it deals primarily with the more recent electrical devices used in the study of air-borne sound waves. The limitations and fields of application of electrical instruments such as microphones, oscilloscopes, and harmonic analyzers are discussed.—S. S. Stevens (Harvard).

5467. Williams, R. D., & Bellows, R. M. *Background of contemporary psychology.* Columbus, O.: Harold L. Hedrick (lithograph publisher), 1935. Pp. 319.—This book presents a survey of the historically important psychological concepts from the time of the Greeks to the present.—S. Rosenzweig (Worcester State Hospital).

5468. Witty, P. A., & La Brant, L. L. **Experimentalism and its relation to a new psychology.** *Educ. Adm. Supervis.*, 1935, April, 289-298.—The authors make a plea for a reform in our philosophy of education, so that teaching may be based upon current psychological concepts. They feel that recent work in the fields of growth and maturation and the findings of the Gestaltists have many implications for educational theory. Because of the concepts which have developed in these fields we find that such words as creative intelligence and purpose take on new meaning for the teacher. Finally, they make a plea for socialized training for the child.—F. J. Gaudet (Dana).

[See also abstracts 5510, 5599, 5669, 5992.]

#### SENSATION AND PERCEPTION

5469. Bagh, K. V. **Quantitative Untersuchungen auf dem Gebiete der Berührungs- und Druckempfindungen.** (Quantitative studies of touch and pressure sensation.) Helsinki: Finn. Literaturges., 1934. Pp. 102.—The apparatus indicates the pressure, the depth to which the skin is deformed and the extent of the skin that is deformed. Two points are stimulated and adjustments made till the sensations seem equal. Amount of deformation of the skin seems to be the most important index. The author believes there is a separate system for touch and for pressure.—H. E. Burtt (Ohio State).

5470. Bales, J. F., & Follansbee, G. L. **The after-effect of the perception of curved lines.** *J. exp. Psychol.*, 1935, 18, 499-503.—Subjects first inspected a curved stimulus line and then a straight test line and were asked whether the test line appeared straight or curved. If it appeared curved the test line was bent until the subject declared that it appeared straight. The extent to which the test line was bent gave a measurement of the amount of apparent curvature. In test series I 11 subjects inspected a stimulus line (convex to left) 30 cm. long with a displacement of 40 mm. at the center for 10 minutes. The average displacement was 1.73 mm. A repetition of the test with the inspection time reduced to 5 minutes gave an apparent displacement of 1.5 mm. In test series II 12 subjects were tested, using a curved line with an 80-mm. displacement at the center. The stimulus was exposed for 5 minutes. In this case the greater curvature of the stimulus line did not increase the after-effect, but on the contrary diminished it slightly. Test series III was concerned with the change in amount of after-effect resulting from the interposition of intervals of varying character between the inspection period and the test period. A new group of subjects was used. The average after-effect immediately after a 5-minute inspection period was 2.5 mm.; with a 30-second fixation interval between inspection period and test the effect dropped to 1.58 mm.; with a 60-second interval it dropped to .83 mm. Following 30- and 60-second reading intervals after-effects of 1.78 and 1.55 mm. occurred.—H. W. Karn (Clark).

5471. Beacher, L. L. **Practical measurements of sizes and shapes of ocular images and their applica-**

**tions.** *Amer. J. Optom.*, 1935, 12, 259-265.—R. J. Beitel, Jr. (Clark).

5472. Benjamins, C. E. **Die Funktion des Sacculus.** (The function of the sacculus.) *Acta otolaryng.*, Stockh., 1935, 22, 338-347.—Apart from an unimportant exception in rotation, the sacculus does not participate in the static functions. The otoliths of the sacculus cannot move much and are separated from the sense cells by a granular tissue. In man, as in fish, the important function of the sacculus is in perceiving sound. The fine tone discrimination is made in the cochlea, but the more confused tone combinations, such as noises, are perceived by means of the sacculus. Bibliography.—M. B. Mitchell (New Hampshire State Hospital).

5473. Bickerton, J. M. **Prevention of hereditary blindness.** *Eugen. Rev.*, 1935, 27, 101-107.—A summary of a paper by Franceschetti, dealing with hereditary eye diseases, their modes of transmission, their relative incidence; the social consequences of blindness; and, especially stressed, with the medical, hygienic, and medico-social measures for preventing hereditary blindness. In the latter connection, Franceschetti recommends collection of detailed, complete statistics on blindness; training of physicians, especially ophthalmologists, in genetics; educating the public and public authorities; extending premarital consultation services with increasing use of social workers; decreasing consanguineous marriages; and making sterilization available to patients whose families are afflicted with hereditary blindness, various manifestations of which are included in the discussion.—G. C. Schwesinger (American Museum Natural History).

5474. Bonaventura, E. **Alcuni fenomeni delle percezione visiva.** (A few phenomena of visual perception.) *Arch. Ital. Psicol.*, 1935, 13, 13-24.—By means of new experimental devices the author proves a few phenomena pertaining to: (1) the variations of the luminous threshold for still and moving stimuli; (2) some limitations met with by Talbot's law ("A luminous stimulus varying periodically and regularly repeated at short intervals produces a continuous visual impression"). The former variations are explained by the structural laws of the perceptual field; the latter variations are explained by the variation of the relations between the angular velocity and the linear velocity of the visual stimuli during the revolution of the disks.—R. E. Schwarz (V. A. Facility, Northampton, Mass.).

5475. Boring, E. G. **The relation of the attributes of sensation to the dimensions of the stimulus.** *Phil. Sci.*, 1935, 2, 236-245.—"The four classical attributes of sensation are quality, intensity, extensity, and protensity. The conventional view has been that these are respectively correlated with four aspects of the stimulus, and this paper is written with the intention of refuting this view." It is shown that reactions may be joint functions of the several dimensions of the stimulus in such manner that any number of responses could be yielded by changing relations between the variables. By a mathematical display

of the different functions possible from  $a$ ,  $b$ ,  $c$ , . . . varying independently the author shows that "the number of attributes of a sensation is independent of the number of dimensions of the effective stimulus. A bidimensional stimulus may yield a sensation with one or  $n$  attributes."—C. C. Peters (Penn. State).

5476. Boström, C. *Några ord om det nya färgsinnesundersökningarna*. (Some words about the new procedure for testing for color blindness.) *Svenska Läkartidn.*, 1935, 32, 1057-1064.—See IX: 4916.—M. L. Reymert (Mooseheart Laboratory for Child Research).

5477. Brock, F. W. *The Argyll-Robertson pupil and its significance*. *Amer. J. Optom.*, 1935, 12, 253-258.—R. J. Beitel, Jr. (Clark).

5478. Bromberg, W. *Tactual perception in alcoholism: study of the influence of alcoholic and of other psychotic states on tactual after-effects*. *Arch. Neurol. Psychiat., Chicago*, 1932, 28, 37-51.—After-effects are prolonged in alcoholics, normal in schizophrenics.—D. G. Marquis (Oxford, England).

5479. Carr, H. A. *An introduction to space perception*. New York: Longmans, Green, 1935. Pp. xi + 413. \$2.40.—The book is written not as an exhaustive treatise but as a systematized introduction to the problem of the "perception of the spatial attributes of objects, viz., their size, shape, stability, motility, and their distance and directional locations in reference to each other and to the perceiving subject." The problem of nativism vs. empiricism is considered with reference to specific topics. The account is limited to auditory (2 chapters) and visual (7 chapters) space with an introductory chapter on the spatial cooperation of the senses. The treatment of illusions is incorporated in the analysis of the factors involved in various spatial discriminations. Each chapter is accompanied by selected references.—W. S. Hunter (Clark).

5480. Chidester, L. *A preliminary study of bisection of lines*. *J. exp. Psychol.*, 1935, 18, 470-481.—Subjects attempted to bisect lines of lengths 5, 10, 25, 37.5, and 50 cm. by marking the apparent midpoint with a pencil which they were instructed to hold so that the point projected some distance beyond the hand. Both eyes were first used together, then the right and then the left alone. For each bisection, the left segment of the line was measured, as a percentage of the total length. The principal results are as follows: (1) There exist for lines of different lengths large systematic differences in the estimated points of bisection. (2) For any one line, the differences of estimation for different eye conditions usually are large. (3) In general, there is a strong resemblance between sets of determinations made by a given subject on different days. (4) The curves of means show that, in general, the results for the two eyes together are in no sense a mean of the two taken singly. (5) Dispersions for both eyes are approximately the same as for each separately. (6) Ocular dominance does not seem to affect the dispersions. The significance of certain characteristic individual differ-

ences among the subjects is discussed.—H. W. Karn (Clark).

5481. Costa, A. *Osservazioni su diversi apprezzamenti di figure prospettiche*. (Remarks on various estimates of perspective figures.) *Arch. Ital. Psicol.*, 1935, 13, 9-12.—The author presents a few geometric perspective figures in which: (1) is verified an illusion in the estimate of size with regard to rectangles and rhomboids, pointed out by Kiesow in 1924; and (2) one meets the tendency to an over-estimate of the angular amplitude of dihedra with the opening turned upward as compared with dihedra with the opening turned downward.—R. E. Schwarz (V. A. Facility, Northampton, Mass.).

5482. Cotton, J. C. *Beats and combination tones at intervals between the unison and the octave*. *J. acoust. Soc. Amer.*, 1935, 7, 44-50.—The experiment was designed to determine at what frequencies between 500 and 1000 cycles a tone would produce beats when sounded simultaneously with a fixed tone of 1000 cycles. Nineteen such beat regions between the unison and the octave were readily observed. The results are discussed in the light of the subjective tone theory and the "asianic" wave theory, and although the experiments do not establish the validity of either of these theories the author favors the "asianic" theory, which considers the ear strictly as a harmonic analyzer and neglects the problem of non-linearity, upon which the subjective tone theory is based.—S. S. Stevens (Harvard).

5483. Cowles, J. T. *An experimental study of the pairing of certain auditory and visual stimuli*. *J. exp. Psychol.*, 1935, 18, 461-469.—In this experiment the subject listened to a musical selection played on a phonograph, and at the same time viewed one by one a group of colored reproductions of paintings. Partial agreement was found in the choosing of certain pictures to correspond with certain musical selections. This agreement was the same when the choice was to be based upon equivalence of mood as when it was simply one of correspondence and with an introspective report of reasons. Certain combinations were never chosen. Among the combinations most frequently chosen, pictures with represented content capable of motor activity were selected with musical selections of prominent dynamic changes; and likewise, pictures of slight content were selected with music of weak dynamic qualities. The introspective reports suggested this relationship. The less dynamic music and the pictures with less express content were most often said to correspond on a basis of mood or abstract elements. Formal elements of the pictures were rarely noted. Rhythm, tempo, and changes in loudness were most frequently noted. There was no mention of hedonic response. No substantial difference was found either in the choices or reports of musical and unmusical observers.—H. W. Karn (Clark).

5484. Creed, R. S. *Observations on binocular fusion and rivalry*. *J. Physiol.*, 1935, 84, 381-393.—When two patterns of quite similar design but different in color are placed simultaneously in a stereoscope,

the design of one of them is seen, but its color is modified. The conditions under which this dissociation of form from color occurs are described and discussed.—*M. A. Rubin* (Clark).

5485. *De Burlet, H. M. Vergleichend Anatomisches über endolymphatische und perilymphatische Sinnesendstellen des Labyrinthes.* (Comparative anatomy of endolymphatic and perilymphatic sensory end organs.) *Acta otolaryng., Stockh.*, 1935, 22, 287-305.—In the lowest vertebrates there are no perilymphatic sense organs. Their first appearance is in connection with the labyrinths. In some fish the air sac is connected with the sacculus. Some reptiles have three groups of sense organs in the sacculus, the macula lagena, the papilla basilaris (which becomes the organ of Corti in mammals), and the papilla amphibiorum (found only in reptiles). In birds and mammals, the perilymph and endolymph chambers become more and more distinct.—*M. B. Mitchell* (New Hampshire State Hospital).

5486. *Dekking, H. M. Photographic investigation of the eye.* *J. Biol. Photogr. Ass.*, 1935, 3, 88-118.—Equipment and methods are described and illustrated for photographing the corneal surface and the anterior and posterior segments of the eye in black and white, in color and with infra-red light. The avoidance of glare is indicated and references to earlier methods are included.—*O. W. Richards* (Yale).

5487. *Dudycha, G. J., & Dudycha, M. M. A case of synesthesia: visual pain and visual audition.* *J. abnorm. soc. Psychol.*, 1935, 30, 57-69.—The subject is a woman who was twenty years old and a college senior at the time of examination. She always experienced photisms whenever she was stimulated in either of the two sense departments. In all but two types of pain—cramp and numbness—the photisms have color in addition to a characteristic form; but in the audition photisms color never appears, only brightness. In the pain photisms there is movement of some kind. Some photisms are two-dimensional, whereas others are definitely three-dimensional. Movement is indicated in the audition photisms by the positions of the various elements, that is, the succeeding tones are always seen to the right of the preceding tones. Although these photisms vary as to form, size and brightness there are some marked similarities: higher tones are always seen as being above lower tones; all tones with the exception of that of the oboe bassoon are seen as two-dimensional bars or three-dimensional tubes. All photisms are a very intimate part of the subject's experience and, for her, are as vivid as actual perceptions.—*C. H. Johnson* (Boston Psychopathic Hospital).

5488. *Eames, T. H. The relationship of anisotropia and eyedness.* *Amer. J. Optom.*, 1935, 12, 295-300.—“A group of 290 cases was examined and 137 anisotropic cases were found. The relation of anisotropia to eyedness and handedness was studied. 64.9% were found to present conditions such as would be expected in the conditioning of eyedness by lower refractive error (or emmetropia) in one eye. The percentage of males was greater than that of the

females in this group. Right-eyed groupings presented greater sex differences in general. Nearly two-thirds of the cases presented eyedness on the same side as handedness, while the eye with the lower refractive error was on the same side as the dominant hand in nearly half of the cases. The males presented a higher incidence of handedness on the same side as the better eye, while the sex difference in the group with eyedness and handedness on the same side was less than 2% and of relatively little importance.”—*R. J. Beitel, Jr.* (Clark).

5489. *Feinbloom, W. Report of 500 cases of subnormal vision.* *Amer. J. Optom.*, 1935, 12, 238-249.—As a result of the use of several newly developed devices, together with those already known, and an appreciation of the physiological and psychological problems associated with their use, the author has found it possible to rehabilitate approximately 60% of a group of unselected cases of sub-normal vision. It is felt that this figure should hold for the next 500 cases, provided the frequency distribution of the causes for the sub-normal vision and the ages of the patients remain about the same.—*R. J. Beitel, Jr.* (Clark).

5490. *Fromm, B., Nylén, C. O., & Zotterman, Y. Studies in the mechanism of the Wever and Bray effect.* *Acta otolaryng., Stockh.*, 1935, 22, 477-486.—Human beings, guinea pigs, and rabbits were used as subjects. Although the human subjects had suffered inner ear damage, so that the stimulus could be applied to the cochlea, the Wever and Bray effect was produced. When the nerve was incised entirely, as well as partially, the effect still remained. For this reason the authors believe that the effect from the nerve and brain stem derives from the cochlea rather than from the nerve below the electrode, as Wever and Bray assumed. Heating of the cochlea in guinea pigs increased the effect from the cochlea. This is consistent with the reduction found by Adrian when it was cooled. The effect is weakened by death, but remains for 30-80 minutes. The results from the brain stem, cortex, and cochlea are not affected by narcosis. It seems likely that the receptors in the cochlea respond directly to the electrical waves without first being transformed into mechanical vibrations.—*M. B. Mitchell* (New Hampshire State Hospital).

5491. *Gellhorn, E., & Spiesman, I. The influence of hyperpnea and of variations of O<sub>2</sub>- and CO<sub>2</sub>-tension in the inspired air upon hearing.* *Amer. J. Physiol.*, 1935, 112, 519-528.—A study of the function of the auditory sense organs was chosen as a means of investigating the effect on the excitability of the cortex of variations in oxygen and carbon dioxide in humans. Audiometric tests in a nearly sound-proof room were carried out under different degrees of oxygen and carbon dioxide obtained by breathing from Douglas bags. With 9 to 12% oxygen there was a gradual diminution of hearing, which was sometimes immediately and at other times not so immediately reversible with the readmission of air. Under 12 to 15% oxygen there was sometimes a slight increase and then a decrease of hearing. Control

breathing of air from similar bags showed no effect. Carbon dioxide, on the other hand, showed no effect on hearing up to  $3\frac{1}{2}$  to 4% and from that concentration showed a slighter decrease in hearing than did oxygen. Recovery was also faster than with oxygen, and improvement in hearing after readmission of air was characteristic. After three to six minutes of voluntary hyperpnea a decrease in hearing occurred which might last as long as from 5 to 10 minutes, and an increase in acuity sometimes followed the return to normal sensitivity. Frequencies used were 1024 for the most part, but samples with 128 and 4096 showed similar results. It is held that results were probably not due to diminution of attention or to the slight blood pressure changes which occurred, but that they were probably due to cellular oxygen lack similar to that demonstrated by Gildea and Cobb in ganglion cells of lamina III and IV of the cortex under complete temporary anoxemia. The effect of hyperpnea is interpreted as probably due to oxygen lack resulting from vasoconstriction to such an extent as to overcompensate the decrease in  $\text{CO}_2$  from hyperventilation. Findings of several authors which do not concur with these results are discussed and suggestions are made as to the reasons for the apparent discrepancy.—*T. W. Forbes* (N. Y. Psychiatric Institute).

5492. Gellhorn, E., & Spiesman, I. The influence of hyperpnea and of variations of the  $\text{O}_2$ - and  $\text{CO}_2$ -tension in the inspired air upon after-images. *Amer. J. Physiol.*, 1935, 112, 620-626.—The influence of the factors named in the title upon after-images was investigated with 8 subjects after several weeks of training. A colored square on black and gray backgrounds and an uncolored diaphragm mounted in a lighted box gave the visual patterns, while the room illumination was adjusted to give a convenient latency. Voluntary hyperpnea of 2 to 6 minutes was used. The measure of latency was the time at which a negative after-image changed from blurred to sharp. Oxygen lack (9.2 to 11.0%  $\text{O}_2$ ) resulted in reports of less saturation for the colored square, a dimming of the white diaphragm, late development of the positive after-image, and a blurring, longer latency and decreased intensity of the negative image. The latter was sometimes entirely absent. Effects were completely reversible. A nitrogen-air mixture produced no such effects. Carbon dioxide, when increased above 4%, and hyperpnea gave effects which were similar to those of oxygen lack, but less pronounced in the case of carbon dioxide. The result was attributed to the visual mechanism rather than to pupillary contraction or dilatation, since the effects were the same when an artificial pupil was used. It is pointed out that effects are in general similar to previous findings with auditory acuity, the only difference being that no decreased latency was found to correspond to the increased acuity after recovery. However, it is felt that this may have occurred. The findings are attributed to cellular changes, as in the previous paper.—*T. W. Forbes* (N. Y. Psychiatric Institute).

5493. Godefroy, J. C. L. Die Lokalisation von Vibrationsempfindungen bei zunehmenden Druck.

(The localization of vibratory sensations with increasing pressure.) *Prov. konin. Akad. Wetensch. Amst.*, 1934, 37, No. 4. Pp. 12.—*R. R. Willoughby* (Clark).

5494. Hayes, S. P. Facial vision, or the sense of obstacles. *Perkins Publ.*, 1935, No. 12. Pp. 45.—The author offers a critical review of the theories set up to explain the "obstacle sense." Several distinct trends are evident. These attempts at explanation may be summarized as follows: (1) a heightened response of some sense organ, known or unknown; (2) an indirect and complicated response to sensory cues; (3) a perceptual interpretation of cues from one or more sense organs; (4) occult explanations. "Further progress on the problem awaits extended research based upon the best contributions up to date." Suggestions for future investigation are presented.—*R. J. Beitel, Jr.* (Clark).

5495. Hays, H. The modern conception of deafness. Milwaukee: Caspar, 1932. Pp. 149. \$2.50.—The purpose of this book to give to the medical profession a "precise picture" of what is being done for the hard of hearing, not only medically but also socially and economically; and also of the work which is being done on the prevention of deafness in children by otologists. In his chapter on the physiology of hearing the author reviews the recent experimental work on the problem and proposes the hypothesis that auditory nerve impulses are "stepped up at definite intervals so that a continual original stream of energy reaches the brain. . . . It may be possible that the amplification of the sound occurs in the nerve itself in this way." The book contains chapters on tests of hearing; causation of deafness; methods of examination of deafened persons; symptoms of deafness; and treatment of hard of hearing children and adults. The last eight chapters of the book were written by different individuals familiar with such topics as lip reading; hearing aids; fads, frauds, and nostrums; the deaf-mute problem; the sociological and psychological problem of deafness; and overcoming handicaps of deafness.—*C. V. Hudgins* (Clarke School).

5496. Hicks, A. M., & Hosford, G. N. Orthoptic treatment of squint. *Arch. Ophthal.*, Chicago, 1935, 13, 1026-1037.—A critical consideration of the physiological and psychological conditions upon which the success of orthoptic training depends. Data are presented showing, among other things, that fusion and depth perception may be present after operation for squint when there has been no orthoptic training; that increase in ductions gained by orthoptic training is lost when training is discontinued; and that certain cases show no benefit at any time. In summarizing, the authors indicate the value of orthoptic training and enumerate conditions which frequently make such training fruitless.—*M. R. Stoll* (Massachusetts Eye & Ear Infirmary).

5497. Hisata, T. Ueber den erscheinenden räumlichen Abstand zwischen den zwei Geräuschen: Einfluss der Zeitbedingungen und der optischen Reize. (On the phenomenal spatial distance between two noises: effect of temporal conditions and of visual

stimuli.) *Jap. J. exp. Psychol.*, 1935, 2, 1-11.—In a dark room two vertical lines with a distance of 4 cm. were given successively with a definite interval of time, and at the same time two sounds with a spatial distance of 20 or 40 cm. were given likewise successively along with the visual stimuli. The devices giving the visual and auditory stimuli were arranged on the arm of a large perimeter horizontally laid. Different duration of stimulation as well as different intervals between them were used and five subjects were asked to locate the sound stimuli in relation to the visual ones. It was shown that though there appears a phenomenal movement with regard to sound as well as to visual lines in their optimal speed of presentation, their temporal relation is not certain. As partial movement, sound moves more often over a larger spatial extent than lines; it appears with depth, while lines appear on a plane surface. When intervals became so small that stimuli appeared simultaneously, a single sound was heard in the median plane and two lines were seen side by side. An apparent reduction of intervals between sounds is the more marked, the more intervals as well as duration of stimulation decrease. When the duration is too great, a phenomenal reduction seems to disappear, even though intervals come to decrease. Judgment of spatial intervals of two sounds depends more upon those of visual stimuli taken as a basis of orientation than upon those of the physical sounds themselves.—*R. Kuroda* (Keijo).

5498. *Huizinga, E. On the sound reactions of Tullio.* *Acta otolaryng., Stockh.*, 1935, 22, 359-370.—Tullio's work on characteristic head movements of pigeons in response to sound when apertures had been made in the bony labyrinth was confirmed. The reactions are similar to those produced by rotation and may cooperate with or oppose them. These reactions remain after extirpation of the cochlea, but disappear when the external meatus is closed. Tullio believes that the reflex excitability of the crista is increased by the making of an aperture. The author believes, however, that the phenomena are caused only by the presence of this opening, which, like the second window of the cochlea, gives the sound wave the opportunity to escape. The direction of the sound did not seem to influence the reaction.—*M. B. Mitchell* (New Hampshire State Hospital).

5499. *Jalota, S. S. An analysis of the first attempt tracing-time in mirror-drawing.* *Indian J. Psychol.*, 1934, 9, No. 1-2, 39-43.—Out of thousands of people who tried a mirror-drawing test at a "health exhibition," only 57 females and 63 males completed the task. The records of these subjects were treated, together with those of 8 graduate students. On the basis of the tracing time for the initial attempt, there seem to be four types of subjects. The methods used by the fastest and slowest groups of subjects were obtained from their introspections, and are summarized. 50% of the females and 19% of the males fall in the fastest group.—*H. Schlosberg* (Brown).

5500. *Kock, W. E. On the principle of uncertainty in sound.* *J. acoust. Soc. Amer.*, 1935, 7, 56-58.—"Following Stewart, a discussion of the application of

the principle of uncertainty to sound phenomena is given. Various sound phenomena are thereby explained and certain related experiments with frequency vibrato are reported. The phenomena explained are: the chromatic glissando imitation of a portamento, analysis of a formant into a Fourier series, the relation between vibrato wideness and pitch range and the pleasing effect of a frequency vibrato."—*S. S. Stevens* (Harvard).

5501. *Laird, D. A. Acuity of hearing.* *Science*, 1935, 82, 152-153.—Early afternoon sluggishness among mental workers has been previously reported and "is probably a form of drowsiness related to the shift of blood from the splanchnic region following a meal." Seven "healthy young men" showed a dulling of their sense of hearing after they had eaten their noon meal. On days when heavy meals had been eaten, the average minimum intensity audible for a tone of 256 cycles on the Western Electric 2A audiometer was 7.0 decibels; on the days when a cereal lunch was eaten the average threshold intensity was 4.5 decibels.—*R. Goldman* (Clark).

5502. *Laird, D. A. What can you do with your nose?* *Sci. Mon., N. Y.*, 1935, 41, 126-130.—Replies from eminent people show that odors have strong memory-stimulating power in a very great number of persons. Have educators and advertisers neglected them unduly?—*J. F. Dashiell* (North Carolina).

5503. *Lehrfeld, L. Visual allergy to light and intolerance to light.* *Arch. Ophthal., Chicago*, 1935, 13, 992-1013.—The author discusses individual variations in tolerance to light and the multiplicity of possible causes for these differences. He reports results of experiments in which glare was produced by reflections from variously tinted lenses worn by the observer, while acuity was tested with the Clason meter. Since comfort was greater with tinted lenses under such normally intolerable lighting, it is concluded that tinted glasses are of value when the individual shows an intolerance for generally tolerable light. No particular tints were found to be generally preferred.—*M. R. Stoll* (Massachusetts Eye & Ear Infirmary).

5504. *Luckiesh, M., & Moss, F. K. Fatigue of the extrinsic ocular muscles while reading under sodium and tungsten light.* *J. opt. Soc. Amer.*, 1935, 25, 216-217.—The amplitude of convergence was measured by means of an ophthalmic ergograph before and after the subject read for one hour under sodium-vapor or under tungsten-filament light at 5 foot-candles intensity. Convergence amplitude was reduced 6 to 8% after the hour's reading, and tended to be reduced slightly more with sodium than with tungsten illumination.—*M. R. Stoll* (Massachusetts Eye & Ear Infirmary).

5505. *MacElree, G. A., & Morrow, J. F. Causative and interpretational factors in corneal astigmatism.* *Amer. J. Optom.*, 1935, 12, 266-284.—*R. J. Beitel, Jr.* (Clark).

5506. *Mettler, F. A., Finch, G., Girden, E., & Culler, E. Acoustic value of the several components of the auditory pathway.* *Brain*, 1934, 57, 475-483.—

The auditory acuity of dogs was studied by determining the threshold intensity of a 1000-cycle tone for eliciting conditioned leg withdrawal. Removal of the cortex of one hemisphere or destruction of one cochlea is followed by only a very slight loss of auditory acuity (2 to 5 decibels). In a dog with half the cortex removed, the subsequent destruction of either the ipsilateral or the contralateral cochlea produces an additional impairment of acuity of about 10 decibels. Thus the uncrossed fibers of the lateral lemniscus are approximately equal in acoustic value to the crossed components. Removal of the entire cerebral cortex is followed by an enormous reduction of auditory acuity of from 70 to 75 decibels below normal values.—*D. G. Marquis* (Oxford, England).

**5507. Meyer, M. F.** *Fitting into the silent world: the first six years of life.* *Univ. Mo. Stud.*, 1934, **9**, 1-106.—“This book addresses itself to all those who are interested in educating the deaf child.” The aim of the education of the deaf is to fit them into the world of human beings. In order to do this it is necessary to equip them with speech and language which can be understood by hearing people. The best motivation for the deaf child in the acquisition of speech is to have him associate as much as possible with hearing children. In addition special opportunities and means for learning speech and language must be provided for them. The author recommends that deaf children be given special training beginning at the age of three years and continuing through the sixth year. Then the child is entered into the regular day school and educated with hearing children; meanwhile he is to receive further special training. The conventional method of “herding” deaf children into residential schools is opposed. Special methods with beginners which are suggested by the author consist in giving them written language by means of shorthand (phonetic) symbols first until a vocabulary of nouns and verbs has been developed. This is followed by oral speech, using the shorthand spelling as a guide. The book contains studies showing results of the method with several children over a period of three years. A brief treatment of the psychology of language is given. The problems of lip reading, manual language, the use of the strobilion, and rhythm work are discussed.—*C. V. Hudgins* (Clarke School).

**5508. Mezger, K.** *Vergleichende Untersuchungen über die Verlagerung und Wanderung des Sehrichtungszentrums.* (Comparative studies on the displacement and excursion of the visual orientation center.) Düsseldorf: 1934. Pp. 76.—According to Hering there is at the root of the nose a nodal point through which all the vectors of binocular vision may be drawn. Space perception thus depends upon this point of reference. In this investigation it has been found that with one sixth of all subjects used this reference point was displaced from the median position. Often it wandered over a considerable region. Eye dominance is hypothesized as an explanation of the phenomenon.—*L. A. Riggs* (Clark).

**5509. Montgomery, H. C.** Influence of experimental technique on the measurement of differential

intensity sensitivity of the ear. *J. acoust. Soc. Amer.*, 1935, **7**, 39-43.—“The lack of agreement among previous measurements of differential intensity sensitivity indicates that the values obtained depend to a large extent on the experimental conditions. The relative importance of various factors is indicated, and a procedure is suggested which was designed to give the smallest possible values of differential intensity sensitivity. Intensive measurements made by this method upon a single subject, using a pure tone of 1000 cycles, gave values consistently smaller than any previously reported.”—*S. S. Stevens* (Harvard).

**5510. Nemes, T. d.** Harmonic analysis of sound-frequency oscillations with a stroboscopic disk. *Phil. Mag.*, 1934, **18**, No. 118, 303-307.—*R. R. Willoughby* (Clark).

**5511. Oberwegner, L.** Vergleichende quantitative Hörprüfungen an Ohrnormalen mit C<sub>4</sub>-Stimmgabel und C<sub>4</sub>- und C<sub>6</sub>-Klangstab. (Comparative quantitative auditory tests on normal hearers with C<sub>4</sub> tuning forks and C<sub>4</sub> and C<sub>6</sub> sound bar.) *Arch. Ohr., Nas., u. Kehlk Heilk.*, 1933, **135**, 197-207.—*R. R. Willoughby* (Clark).

**5512. Salzi, P.** *La sensation. Etude de la genèse et de son rôle dans la connaissance.* (Sensation. A study of its genesis and role in knowledge.) Paris: Alcan, 1934. Pp. 198. 25 fr.—Salzi solves the problem of induction by the hypothesis that sensation and imagination have their source in intelligence by a sort of emanation. As evidence he uses the therapeutic work of Bates, who treats cases of defective vision by the exercise of the patients' visual imagination. This work gives material on the effect of imagination, suggestion, etc. on perception. Some subjects, for example, are able to project visual images of certain figures which can be conceived but are difficult to exemplify in perception.—*E. T. Mitchell* (Texas).

**5513. Shaad, D.** Binocular summation in scotopic vision. *J. exp. Psychol.*, 1935, **18**, 391-413.—A method consisting of short exposures of discrete stimulus intensities used in ascending series was employed in order to determine whether or not there is binocular summation in the perception of light by the periphery of the dark-adapted eye. A consistent reduction of about 30% in the intensity for binocular thresholds as contrasted with monocular thresholds, demonstrated only when corresponding points of the retinae and hence identical central regions were stimulated, is interpreted as evidence of a central summative effect.—*H. W. Karn* (Clark).

**5514. Smith, W.** A basic technique in orthoptics. *Amer. J. Optom.*, 1935, **12**, 224-233.—*R. J. Beitel, Jr.* (Clark).

**5515. Tait, W. J.** Negative fusional convergence. (A reply to Dr. Hammond S. Horton's recent criticism.) *Amer. J. Optom.*, 1935, **12**, 234-237.—*R. J. Beitel, Jr.* (Clark).

**5516. Thompson, I. M.** Sensory masking—a peripheral or a central phenomenon. *Science*, 1935, **82**, 221.—A cutaneous nerve, when completely blocked

with procaine, had its cutaneous area "quite insensible to all forms of pressure; but the sense of deep pressure remained beneath the anesthetized skin, the impulse ascending from muscles, etc., through other nerves." "It seems that perception of deep pressure (free from touch and superficial pressure) may be reduced, without interfering with the end-organs or the nerve involved, by suitably stimulating another nerve, if the impulses flowing from this stimulation succeed in reaching the sensorium and arousing a sufficiently intense sensation." The diminished perception depends upon a central effect to which is applied Robert's term "masking." The investigation of Davis and Derbyshire indicates that the difficulty in hearing a click simultaneously with a tone depends upon a peripheral effect—"a physiological block" to which some term other than "masking" should be applied.—*R. Goldman* (Clark).

**5517. Voelker, C. H. A preliminary stroboscopic study of the speech of the deaf.** *Amer. Ann. Deaf*, 1935, **80**, 243-259.—The purpose of this study is to compare the speech of deaf children with that of a normal group of the same chronological age from the standpoint of pitch changes and duration. A group of 28 deaf children who had received four years of speech training was used. Speech of the deaf and normal children was recorded by means of the Metfessel strobophotoscope. The children were asked to repeat simple phrases. Results show that deaf children rarely speak with no pitch variation, and in some cases these variations may be as great as those of normal children. Pitch variations in the speech of the deaf, however, are not used "to render meaning to the sentence." Deaf children use three times as much phonation in a given sentence as do normal children. The duration of the speech of the deaf may be as much as four times that of normal children.—*C. V. Hudgins* (Clarke School).

**5518. Wood, D. J. Observations on the human retina.** *Brit. J. Ophthal.*, 1935, **19**, 369-377.—"Ordinary histological methods seem, therefore, to suggest that we can observe in the retina three positions where retinal elements functioning together are collected into groups. We have first the grouping of rods and cones in the cells of the hexagonal epithelium, with an arrangement to ensure equal metabolic changes in the groups. Secondly, before the nerve fibrils enter the next neuronic chain there is a grouping, possibly to form larger units of impressions, and thirdly we have nerve fibers from retinal areas collected up into bundles before they enter the optic nerve."—*R. J. Beitel, Jr.* (Clark).

[See also abstracts 5466, 5528, 5556, 5559, 5577, 5581, 5604, 5619, 5626, 5633, 5634, 5637, 5639, 5645, 5655, 5705, 5797, 5802, 5859, 5868, 5890, 5927, 5951, 5956.]

#### FEELING AND EMOTION

**5519. Hulin, W. S., & Katz, D. The Frois-Wittmann pictures of facial expression.** *J. exp. Psychol.*, 1935, **18**, 482-498.—The first section of the article is devoted to a description and presentation of a series

of 72 photographs designed by J. Frois-Wittmann for the study of the judgment of facial expression. In the second section the authors present the results of their study of non-verbal judgments of facial expression by means of the Frois-Wittmann pictures. Subjects were asked to arrange the 72 photographs in groups according to the number of distinct types of facial expression which they judged to be represented. The findings, which revealed both a wide scatter in the judgments and a few cases of high agreement, are presented as an initial step in the establishment of standards for the Frois-Wittmann pictures.—*H. W. Karn* (Clark).

**5520. Husband, R. W. A study of the emotion of excitement.** *J. genet. Psychol.*, 1935, **46**, 465-470.—25 varsity athletes in many branches of sport were asked to describe their emotions occurring just before competition. Most common physiological symptoms were: frequent urination, hollow feeling in stomach, rapid heart beat, and dry mouth. Excitement commonly developed during the day of the contest or started the previous day, increased up to its start, and then promptly vanished, the dominantly unpleasant feeling-tone altering to pleasant.—*J. F. Dashiell* (North Carolina).

**5521. Samanta, M. The induction of emotional states in laboratory experiments.** *Indian J. Psychol.*, 1934, **9**, No. 1-2, 45-49.—Musical notes were more effective than pictures or words in modifying the frequency, depth and regularity of breathing. This is a preliminary report of a more extensive study, and seems to be based on a number of determinations for each of 6 trained subjects.—*H. Schlosberg* (Brown).

**5522. Wessell, N. Y., & Carmichael, L. Twenty dynamic patterns of expression in which only the hands and arms appear.** (Film.) Providence, R. I.: Psychological Laboratory, Brown University, 1935. 1 reel, 275 ft., 16 mm. Rental and purchase prices on request.—This film shows a series of 20 posed gestures as portrayed by an experienced actor who attempted to represent various emotional states by means of the hands and arms alone. Each gesture is repeated three times. Two titles are given each gesture, (1) that which was intended by the actor, (2) that which was judged by a large group of subjects. In each gesture the hands are seen to assume in the moving picture the desired gesture after starting from a neutral position.—*L. Carmichael* (Brown).

#### ATTENTION, MEMORY AND THOUGHT

**5523. Flugel, J. C. Some recent studies of mental oscillation.** *Indian J. Psychol.*, 1934, **9**, No. 3-4, 1-48.—Little of the earlier work on fluctuations of attention touched on individual differences. Flugel started experimenting in this field before the war. In the earliest experiments, he showed high correlations between measures of variability of 11 subjects in 8 tasks. Group tests were then prepared, and administered to larger numbers of subjects. Some of the data were used by Spearman in the isolation of the

factor "o" (oscillation). The correlations obtained with these and other tests, and with selected questions, were not as high as the first ones obtained, but did indicate the existence of "o." Since that time, both Flugel and Entwistle showed that "o" varies inversely with efficiency in mathematical work. More recent experiments (unpublished) by four co-workers are reviewed, indicating that the "o" obtained from studies of mental work does not show up in fluctuations observed with reversible cubes, threshold stimuli, or reaction times. Introspective reports on the conditions of fluctuation are also presented and discussed.—H. Schlosberg (Brown).

5524. Gergö, A. Az érzékkétek fázisrendszere. (Phases of experience.) *Mag. psychol. Szle*, 1934, 7, No. 1/2, 73-88.—The author arranges the various phases of experience into a system. Starting with the sensory phase of experience, determined by the stimulus, he lists as progressively "deeper" phases: after-image, eidetic image, hallucination and dream, memory image (concept), and general concept. These phases are interrelated, as may be seen from the following facts: (1) there is a decrease in sensory vividness, clearness and differentiation of experiences in the order named; (2) the experiences become more and more generalized; (3) the order in which the phases occur is the result of a neurologically founded development. Because thinking has the function of organizing concepts, the possibility is seen of basing it on sensation as the fundamental structural element of mental life and on sensory experiences as genetically original and therefore basic phases of experience.—H. Beaumont (Kentucky).

5525. Kirsch, E. Aufmerksamkeit und Objektionsfähigkeit. Ein Beitrag zur Typenlehre. (Attention and capacity for objectification. A contribution to typology.) *Untersuch. Psychol., Phil., Päd.*, 1934, 8, No. 4. Pp. 70.—R. R. Willoughby (Clark).

5526. McGeoch, G. O. The factor of degree of learning in reminiscence: a second comparative study of preschool children and college students. *J. genet. Psychol.*, 1935, 46, 455-462.—Reminiscence, defined as improvement in recall of partially learned material after an interval of no relearning, was tested on identical material (toy animals presented simultaneously in a certain order) with five-year-old children and college students. A considerable difference in original learning was found between these ages. With three different groups of the children given three degrees of practice, no evidence was found that reminiscence is a function of degree of learning, either as total scores or as number of "reminisced" items.—H. F. Dashiell (North Carolina).

5527. Moore, E. H. The accuracy of testimony relative to time intervals. *J. crim. Law Criminol.*, 1935, 26, 210-215.—The experimental literature concerning the accuracy of remembering elapsed time intervals is reviewed. Considerable error was found, but no consistent tendency for over- or underestimation. It appears "that 'time-posts' and not consciousness of elapsed time govern our estimates of

time."—L. Ackerson (Institute for Juvenile Research).

5528. Smith, S., & Fitch, E. E. Skill and proprioceptor pattern. *J. genet. Psychol.*, 1935, 46, 303-310.—75 students practiced throwing darts at a target while wearing lenses deflecting the visual field to the right in half the cases and to the left in half the cases. They were all given (1) 20 throws before putting on their lenses, (2) 20 while wearing them, and (3) 20 after removing them. Scores for accuracy produced curves for the three sets of 20 throws that were of very similar shape; but the scores for (2) were definitely poorer than for (1) and those for (3) midway between (1) and (2). Interpretation is given in terms of the conditioning of postural patterns.—J. F. Dashiell (North Carolina).

5529. Stalnaker, J. M. Recognition and recall in a vocabulary test. *J. genet. Psychol.*, 1935, 46, 463-464.—A recognition type and a recall type of vocabulary test were each given to 174 contestants for scholarships. The obtained scores correlated .863. High odd-even reliability was also found for each. For all practical purposes, it is concluded that that one of the two types may safely be used that is most desirable from other points of view.—J. F. Dashiell (North Carolina).

5530. Ufland, J. M., & Wuhl, I. M. De l'influence du travail intellectuel sur la chronaxie motrice et sensorielle. (Effect of mental work on motor and sensory chronaxy.) *Travail hum.*, 1935, 3, 153-164.—The mental work was translating a foreign language or doing arithmetic. Long periods of work (1½ hours) in adults produced decrease in chronaxy for flexor and extensor of the finger and a slight increase in sensory chronaxy for the forearm. Short work periods produced only the first of the above changes. With subjects 14-16 years of age short periods produced decrease for flexor, increase for extensor and considerable increase in sensory chronaxy. The most consistent effect in the experiment is that on the flexor. The phenomenon may be due to cortical influence.—H. E. Burt (Ohio State).

5531. Woodworth, R. S., & Sells, S. B. An atmosphere effect in formal syllogistic reasoning. *J. exp. Psychol.*, 1935, 18, 451-460.—The problem of the study was to discover the psychological factors operating toward the acceptance of invalid conclusions in a syllogism test. "Three such factors are suggested: the ambiguity of the word *some*, which is used in a distributive sense in logic ('at least some') and very often in a partitive sense in ordinary speech ('only some'); 'caution' or wariness, favoring the acceptance of weak and guarded rather than of strong conclusions; and 'atmosphere,' the global impression or 'feel' of the premises, which is affirmative or negative, universal or particular. Examination of the data from two experiments indicates that nearly all the acceptances of invalid conclusions can possibly be explained by these three hypothetical factors."—H. W. Karn (Clark).

[See also abstracts 5820, 5842, 6034, 6043, 6044, 6049, 6054.]

## NERVOUS SYSTEM

5532. Adrian, E. D. The activity of the nerve fibers. (Nobel lecture delivered at Stockholm, December 12, 1932.) *Prix Nobel*, 1934, 1-8.—R. R. Willoughby (Clark).

5533. Adrian, E. D., & Matthews, B. H. C. The Berger rhythm: potential changes from the occipital lobes in man. *Brain*, 1934, 57, 355-385.—Recording the amplified potential changes from the skin of the head in intact human subjects yielded results corroborating Berger's earlier descriptions. Evidence is adduced, however, to show that the potential waves originate not from the cortex as a whole but from a restricted area in the occipital region. The authors believe that the electrical phenomena are due to a spontaneous rhythmic activity of a group of cortical cells. These tend to beat synchronously when they are undisturbed, but visual activity or widespread non-visual activity in the brain breaks up the rhythm by exposing the cells to a mosaic of excitations which makes synchronous action impossible.—D. G. Marquis (Oxford, England).

5534. Barron, D. H., & Matthews, B. H. C. Intermittent conduction in the spinal cord. *J. Physiol.*, 1935, 85, 73-104.—It is found that most of the impulses leaving the spinal cord by the dorsal roots in both the cat and frog are antidromic discharges from sensory receptors. These discharges may be interrupted at some point in the spinal cord, and therefore the term "intermittence" has been given to this interruption of a continuous discharge of impulses. No synapse seems to interrupt the course of these discharges, and this phenomenon has an absolute refractory period not appreciably longer than that of a nerve fiber, conduction occurring in either direction. Intermittence seems to be associated with states of excitation in the gray matter, as is indicated in the hypothesis of intermittence proposed by the authors.—M. A. Rubin (Clark).

5535. Barron, D. H., & Matthews, B. H. C. "Recurrent fibers" of the dorsal roots. *J. Physiol.*, 1935, 85, 104-109.—Histological evidence is offered in support of the hypothesis on the mechanism of intermittent conduction in the spinal cord as suggested by the authors in a previous paper.—M. A. Rubin (Clark).

5536. Berry, R. J. A., & Norman, R. M. Cerebral structure and mental function as illustrated by a study of four defectives' brains. *J. Neurol. Psychopath.*, 1934, 14, 289-322.—Extensive macroscopic and cytoarchitectonic studies were carried out on the brains of four typical mental defectives. The results indicate a significant reduction from the normal in the numbers of supra-granular and granular neurones, although the total depth of cortex at the crowns of the gyri is not appreciably diminished except in the agranular frontal cortex. The brain cells are irregularly arranged, tend to be small in size, and are often of abnormal shape.—D. G. Marquis (Oxford, England).

5537. Bouckaert, J. P., & Katz, B. The effect of interelectrode distance on the time constant of

electric excitation of nerve. *J. Physiol.*, 1935, 85, 10P-11P.—M. A. Rubin (Clark).

5538. Bucy, P. C. Vasomotor changes associated with paralysis of cerebral origin. *Arch. Neurol. Psychiat.*, Chicago, 1935, 33, 30-52.—Case report with review of relevant literature. It is suggested that the vasomotor changes are probably the result of functional interruption of inhibitory fibers from the cortex to the vasoconstrictor centers of the hypothalamus and medulla, with a release of those structures to explosive over-activity and hyperreflexia.—D. G. Marquis (Oxford, England).

5539. Bülbbring, E., & Burn, J. H. The Sherrington phenomenon. *J. Physiol.*, 1935, 85, 1P-2P.—M. A. Rubin (Clark).

5540. Cattell, McK., & Wolff, H. G. On the site of acetylcholine and its significance. *Science*, 1935, 82, 106-107.—Experiments to demonstrate the actual site of action of acetylcholine were done on the eyes of cats to discover whether the effect is on the parasympathetic ganglia or the post-ganglionic nerves. The mammalian eye was used because the parasympathetic (ciliary) ganglion could be readily removed. Acetylcholine was found to be effective in the eye when directly applied to the iris and in the absence of the ciliary ganglia. Generalizing, "it would appear that the physiological properties of the muscle (adrenergic or cholinergic) are bestowed upon it by the proximity of specific nerve fibers and that, once acquired, the specific sensitiveness is retained, at least for a time, after degeneration of the nerve fibers."—R. Goldman (Clark).

5541. Dusser de Barenne, J. G. The disturbances after laminar thermocoagulation of the motor cerebral cortex. *Brain*, 1934, 57, 517-526.—Thermocoagulation of the entire thickness of the cortex of the precentral arm area of one hemisphere in the monkey results in a paralysis which is severe for a few days and disappears in two or three weeks. The destruction of only the outer three layers of the cortex of this area results at most in very slight symptoms, which disappear completely in the course of a few hours. Thus the fourth (giant pyramidal cell) and fifth layers are capable of relatively independent activity in motor function.—D. G. Marquis (Oxford, England).

5542. Dusser de Barenne, J. G. Welche Elemente der Grosshirnrinde bringen bei ihrer elektrischen Reizung die motorischen Reaktionen hervor? (What are the elements in the cerebral cortex which, with electric excitation, produce motor reactions?) *Pflüg. Arch. ges. Physiol.*, 1933, 233, 529-536.—When the three superficial layers of the cortex in the precentral motor zone (Brodmann's areas 4 and 6) were destroyed in the monkey by means of thermocoagulation, it was found that the motor excitability was not modified, the threshold remaining the same. This confirms the probable origin of the motor currents, which have been attributed to the large pyramidal cells of the fourth layer.—(Courtesy *Année psychol.*)

5543. Eccles, J. C. After-discharge from the superior cervical ganglion. *J. Physiol.*, 1935, 84, 50P-

52P.—On the basis of his experiments the author points out that the acetylcholine hypothesis of synaptic transmission is not a good one to explain ganglionic after-discharge. He suggests that the ganglionic cells are stimulated by eddy currents set up by preganglionic impulses. The ions conveying these eddy currents are largely potassium ions. The acetylcholine liberated by preganglionic impulses might have the function of counteracting the onset of fatigue and producing vaso-dilation.—*M. A. Rubin* (Clark).

5544. Fulton, J. F. A note on the definition of the "motor" and "premotor" areas. *Brain*, 1935, 58, 311-316.—In response to Walshe's criticisms (see IX: 5571) the author defends the application of the term "motor area" to the area giganto-pyramidalis.—*D. G. Marquis* (Oxford, England).

5545. Gasser, H. S. The changes produced in the injury discharge of nerve fibers during the period following a propagated disturbance. *J. Physiol.*, 1935, 85, 15P-17P.—*M. A. Rubin* (Clark).

5546. Hoff, E. C., & Hoff, H. E. Spinal terminations of the projection fibres from the motor cortex of primates. *Brain*, 1934, 57, 454-474.—The distribution of the endings of the pyramidal neurones in the spinal cord was studied by the method of bouton degeneration. Most of the terminations are around cells in the intermediate zone of the contralateral gray matter, but a few are found in the dorsal and ventral horns and in the ipsilateral side of the cord.—*D. G. Marquis* (Oxford, England).

5547. Kennard, M. A. Vasomotor disturbances resulting from cortical lesions. *Arch. Neurol. Psychiat.*, Chicago, 1935, 33, 537-545.—In monkeys and apes after a lesion of the premotor cortex the temperature of the skin on the contralateral side of the body is lower than that on the normal side. This effect does not occur after lesions to any other area of the cortex. Experiments on the reaction to extreme environmental temperature changes indicate that the lower skin temperature is due to an alteration of the mechanism of reflex vasodilatation.—*D. G. Marquis* (Oxford, England).

5548. Langworthy, O. R., & Kolb, L. C. The encephalic control of tone in the musculature of the urinary bladder. *Brain*, 1933, 56, 371-382.—Experiments on cats demonstrate that after decerebration through the superior colliculi there is an overaction of the contraction mechanism of the bladder, such that the bladder empties completely on as little as one-fourteenth of the volume of fluid required to produce micturition in the intact preparation. Transection of the brain stem below the inferior colliculi abolishes the reflex of micturition, and the bladder shows retention with overflow. It is concluded that tone in the musculature of the bladder is controlled by similar mechanisms to those that control tone in the striated musculature.—*D. G. Marquis* (Oxford, England).

5549. Lawrentjew, B., & Lawrence, W. Les fibres sympathiques, participant-elles à la structure des appareils sensitifs périphériques? (Do the sympathetic fibers participate in the structure of the

peripheral sensitive mechanism?) *Trab. Lab. Invest. biol. Univ. Mad.*, 1933, 28. Pp. 187.—A comparative neuro-morphological study indicates that the mechanism of Timofeev does not represent an accessory mechanism—there is no anatomical evidence for identification of Timofeev's mechanism with the sympathetic nervous system.—*R. M. Bellows* (Ohio State).

5550. Liddell, E. G. T. Spinal shock and some features in isolation-alteration of the spinal cord in cats. *Brain*, 1934, 57, 386-400.—Previous experiments have demonstrated that immediately after spinal transection in the cat, the centers for the hind limbs show an increased susceptibility to inhibition. A single inhibitory shock to the ipsilateral sciatic nerve depresses the patellar reflex for a period of one or more seconds. In the present experiments the susceptibility to inhibition was investigated at various intervals after spinal transection. There is a gradual recovery manifest by the fourth day and continuing until after fifty to sixty days the susceptibility to inhibition is no greater than that of a decerebrate preparation.—*D. G. Marquis* (Oxford, England).

5551. Liu, A. C. The cooperative action of sympathetic nerve impulses, adrenine and sympathin on the nictitating membrane of the cat. *Amer. J. Physiol.*, 1935, 112, 690-694.—In order to demonstrate the cooperative action of different types of sympathetic activation isotonic contractions of the nictitating membrane of cats were recorded, induction-coil stimulation was applied to the cut cervical sympathetic and to the adrenals by a splanchnic or a sciatic nerve, and sympathin was obtained from the effectors supplied by the cardio-accelerator, the hepatic nerves, and the lower abdominal sympathetic chain. It was found that subminimal stimuli as well as submaximal stimuli summated, whether they were both chemical or one chemical and the other nervous.—*T. W. Forbes* (N. Y. Psychiatric Institute).

5552. Loomis, A. L., Harvey, E. N., & Hobart, G. Further observations on the potential rhythms of the cerebral cortex during sleep. *Science*, 1935, 82, 198-200.—Rhythms from two parts of the head were recorded simultaneously by means of two matched amplifiers and recorders. At least four characteristic types of waves have appeared in the areas studied: spindles, trains, saw-tooth, random. Upon retiring, the "trains" present in adults gradually changed to the "random" type. "Trains" usually reappeared at once if the subject was awakened. "The impression was gained that a change in the level of consciousness was connected with this change in type of wave." Change in types of waves was also brought about by speaking to a drowsing subject. The areas observed showed change in the general type of wave simultaneously. However, "all possible degrees of correspondence as regards amplitude, frequency and time of appearance were observed between the rhythms from the front and back areas. . . . These observations seem to indicate that the individual rhythms arise in different regions of the cortex, but that the gradual change in type from 'trains' to 'random' is dependent

on a change connected with the cortex as a whole." Different types of brain rhythms for children, adults, and animals are mentioned.—*R. Goldman* (Clark).

5553. Lorente de Nò, R. The effect of an antidromic impulse on the response of the motoneurone. *Amer. J. Physiol.*, 1935, **112**, 595-609.—The effect of an antidromic shock on a succeeding test shock was investigated on a simple nerve-muscle preparation (oculomotor nerve), with the motoneurones stimulated through a synapse by shocks on the floor of the fourth ventricle. The nerve was left undisturbed and electrodes introduced through the thalamus. If direct motor shocks were desired the third nucleus was destroyed. Action currents from the internal rectus were recorded. It was found by the use of very weak shocks that recovery was still in progress up to from 15 to 20  $\sigma$ , whereas the absolute refractory period as determined by the use of strong shocks was from 0.52 to 0.60  $\sigma$ , a value corresponding well with a theoretical value deduced by Gasser. The motoneurone, excited across a synapse, showed the same refractoriness as the ordinary nerve-muscle preparation. When the motoneurone was excited across a synapse by two successive shocks on the floor of the fourth ventricle, facilitation was obtained. An antidromic shock applied to the oculomotor axon (beyond the synapse) did not destroy this facilitation. The shortest interval between the antidromic and the second floor (test) shock is discussed in connection with conduction time, to investigate the possibility of the antidromic shock being conducted across the synapse in a reverse direction. It is concluded that the data give "a direct proof of unidirectional conduction across the central synapse."—*T. W. Forbes* (N. Y. Psychiatric Institute).

5554. Lugaro, E. Anciennes et nouvelles recherches sur les fibres centrifuges des racines postérieures. (Old and new researches on the centrifugal fibers of the posterior roots.) *Schweiz. Arch. Neurol. Psychiat.*, 1933, **31**, 284-305.—*R. R. Willoughby* (Clark).

5555. Milch, E. C. Sensory cortical area: an experimental anatomic investigation. *Arch. Neurol. Psychiat.*, Chicago, 1932, **28**, 871-882.—Degeneration studies following small lesions to the sensory cortex of monkeys show a rich interconnection of the different parts of this area and connections with the opposite hemisphere and with the lateral thalamic nuclei of both sides.—*D. G. Marquis* (Oxford, England).

5556. Mootz, R. Umschriebene Hirnprozesse und ihr Einfluss auf den Hörapparat. (Circumscribed brain processes and their influence on the auditory apparatus.) Frankfurt: (Med. Diss.), 1934. Pp. 60.—*R. R. Willoughby* (Clark).

5557. Narikashvili, S. [On the role of the side arc in the conduction of nerve impulses.] *Trud. biol. Sekt., Akad. Nauk SSSR, zakavkaz. Filial*, 1934, **1**, 169-170.—The author has carried out experiments demonstrating that it is possible to discontinue the propagation of excitation along the nerve by leading away the bio-electrical current into a metallic side arc.—*R. Smith* (Clark).

5558. Prosser, C. L. Action potentials in the nervous system of the crayfish, IV. Influence of temperature on nerve impulses arising "spontaneously" in abdominal ganglia. *J. gen. Physiol.*, 1935, **19**, 65-73.—The spontaneous impulses from deafferented crayfish ganglia are recorded by means of a Matthews oscillograph and an amplifier. Over a temperature range of 10-30° C. the alteration of gross frequency gives a temperature characteristic ( $\mu$ ) of 27,000 calories. The alteration of gross frequency is due to a change in the number of active fibers and in the frequency of discharge of individual units. The change in number of active units yields a  $\mu$  of 17,500. Individual fibers fall into two groups as indicated by the effect of temperature on their frequency of discharge: one group has a  $\mu$  value of 14,000 and the other gives a  $\mu$  of 7,000 calories.—*M. A. Rubin* (Clark).

5559. Pumphrey, R. J. Nerve impulses from receptors in the mouth of the frog. *J. cell. comp. Physiol.*, 1935, **6**, 457-467.—An amplifier and oscillograph were used to record impulses in the superficial epithelium of the mouth of grass- and bullfrogs. Receptors were found for tactile stimuli, together with two kinds of chemoreceptors specifically sensitive to salt and sour substances. Evidence was presented indicating that the taste receptors are located in end organs in the epithelium.—*O. W. Richards* (Yale).

5560. Ranson, S. W. The anatomy of the nervous system. Philadelphia, London: Saunders, 1935. Pp. 501. \$6.50.—This, the fifth edition, has been revised to bring the text up to date. The addition to this edition consists of a large number of illustrations of various sections through the brain which have been grouped together as an atlas at the end of the text. There are 381 illustrations, some in colors, and 333 references in the bibliography.—*M. A. Rubin* (Clark).

5561. Ranson, S. W., Kabat, H., & Magoun, H. W. Autonomic responses to electrical stimulation of hypothalamus, preoptic region and septum. *Arch. Neurol. Psychiat.*, Chicago, 1935, **33**, 467-477.—Stimulation (in cats) of the gray matter surrounding the anterior commissure not far from the midline, or stimulation of the adjacent portion of the septum, inhibits respiration and causes contraction of the bladder and sometimes a drop in the blood pressure. Stimulation of the hypothalamus causes an increase in the rate and depth of respiration, an increase in the blood pressure, inhibition of gastro-intestinal peristalsis, and dilatation of the pupils, as well as contraction of the bladder.—*D. G. Marquis* (Oxford, England).

5562. Rosett, J. The myth of the occipitofrontal association tract. *Arch. Neurol. Psychiat.*, Chicago, 1933, **30**, 1248-1258.—Dissections and microscopic evidence are presented to demonstrate that the sub-callosal bundle is not an occipitofrontal association tract, but an efferent projection system of the anterior half of the hemisphere.—*D. G. Marquis* (Oxford, England).

5563. Rowe, S. N. Localization of the sleep mechanism. *Brain*, 1935, **58**, 21-43.—The brains of three

cases of diencephalic tumor, of which two showed marked hypersomnolence, were examined microscopically. The results suggest that disturbances of normal sleep rhythm result from bilateral lesions of a rather diffuse central correlating mechanism which may lie in the medial thalamic nuclei, or from the interruption of a thalamico-periventricular-hypothalamic-mesencephalic chain of neurones conducting impulses to or from such a mechanism.—D. G. Marquis (Oxford, England).

5564. Saum, M. Chronaximetrische Untersuchungen über die Wirkung von Lokalanesthetica am motorischen Nerven. (Chronaximetric investigations on the effect of local anesthetics on motor nerves.) *Arch. exp. Path. Pharmak.*, 1932, 171, 619-649.—R. R. Willoughby (Clark).

5565. Sherrington, C. S. Inhibition as a coordinative factor. (Nobel lecture delivered at Stockholm, December 12, 1932.) *Prix Nobel*, 1934, 1-12.—R. R. Willoughby (Clark).

5566. Silveria, A. As funções do lobo frontal. (The functions of the frontal lobe.) *Rev. Neurol. Psychiat. S. Paulo*, 1935, 1, 196-228.—The author surveys the works that have focused upon the mutual relations between the frontal lobe and intelligence from the earliest philosophical theories to present-day anatomical theories. The architectonic researches of Economo, Vogt and Rose are reviewed. It is concluded that intellectual functions depend upon the frontal region. A bibliography of 114 titles is appended.—R. M. Bellows (Ohio State).

5567. Solandt, D. Y. Measurement of human nerve "accommodation." *J. Physiol.*, 1935, 85, 5P-6P.—By stimulating the ulnar nerve at the elbow and measuring the tendon twitch at the wrist, an index of nerve stimulation was obtained. The response as a function of the intensity of stimulation results in a straight line which has a slope (accommodation) constant of 62.5 milliseconds.—M. A. Rubin (Clark).

5568. Spiegel, E. A. Role of vestibular nuclei in the cortical innervation of the eye muscles. *Arch. Neurol. Psychiat., Chicago*, 1933, 29, 1084-1097.—Bilateral injuries to the vestibular nuclei change the direction of the eye movements elicited by stimulation of the occipital cortex in cats. In conjunction with previous experiments, these results indicate that the cortical control of eye movements is effected not by means of direct fibers to the posterior longitudinal fasciculus or to a subcortical gaze center, but by connections to the vestibular nuclei.—D. G. Marquis (Oxford, England).

5569. Taylor, F. V. Transformation of coordination after crossing the Achilles tendons in the frog. *Science*, 1935, 82, 127.—Repeating Manigk's experiments, the author found no evidence that the transposition of the gastrocnemius muscles occasions a change in their innervation rhythm. The un-denervated gastrocnemii do not produce foot movements. Since no demonstrable change in the innervation rhythm of the gastrocnemii due to their transposition has been found, there seems to be no necessity for a

revision of the existing theories of reciprocal innervation.—R. Goldman (Clark).

5570. Uttr, K. Vegetativni centra v diencephalu. (Vegetative centers in the diencephalon.) *Rev. Neurol. Psychiat., Praha*, 1935, 32, 104-114.—A systematic review of present-day knowledge about the diencephalon, based on French, German and Czech literature. The anatomy is described and physiological implications as well as the problem of localization are discussed. The general conclusion is that we know still very little about that important part of the brain.—Z. Piotrowski (Columbia).

5571. Walshe, F. M. R. On the "syndrome of the premotor cortex" (Fulton) and the definition of the terms "premotor" and "motor": with a consideration of Jackson's views on the cortical representation of movements. *Brain*, 1935, 58, 49-80.—Present evidence is inadequate to permit the division of symptoms following cortical lesions into premotor area and motor area syndromes.—D. G. Marquis (Oxford, England).

5572. Walshe, F. M. R. The disorders of motor function following an ablation of part of the "leg area" of the cortex in man. *Brain*, 1935, 58, 81-85.—Circumscribed ablation of that portion of the motor area (area gigantopyramidalis) from which movements of foot and toe could be elicited on faradic stimulation is followed by paralysis of the leg, from which there is rapid recovery of movements of the proximal part of the limb. Hypertonus developed early and tended to increase in degree. Tendon jerks were increased and the plantar response was extensor in type. These findings indicate that spastic paralysis may ensue without encroachment upon the premotor area of the cortex.—D. G. Marquis (Oxford, England).

5573. Walshe, F. M. R., & Robertson, E. G. Observations upon the form and nature of the "grasping movements" and "tonic innervation" seen in certain cases of lesion of the frontal lobe. *Brain*, 1933, 56, 40-70.—Reexamination of published descriptions and study of eight cases with frontal lobe lesions led the authors to question the reflex nature of the grasping movements observed in such patients. Two distinct and separable components of the phenomena should be recognized: (1) grasping movements, elicited by tactful or visual stimuli, and subject to the voluntary control of the patient; (2) tonic innervation, a reflex elicited by the proprioceptive stimulus of stretching the grasping muscles. The latter is entirely outside the patient's control.—D. G. Marquis (Oxford, England).

5574. White, J. C. The autonomic nervous system: anatomy, physiology and surgical treatment. New York: Macmillan, 1935. Pp. xv + 386. \$7.00.—(Not seen).

5575. Wolff, H. G., & Cattell, McK. Effects of stimulation of sympathetic and dorsal roots on contraction of skeletal muscle. *Arch. Neurol. Psychiat., Chicago*, 1934, 32, 81-117.—The tension developed by the isolated gastrocnemius muscle of the frog, stimulated through its sciatic nerve, was determined quantitatively by isometric recording. Concurrent

stimulation of the abdominal sympathetic trunk resulted in an increase in tension in 60% of the animals, a slight decrease in 20%, and no effect in 20%. Stimulation of the dorsal roots was effective in decreasing the tension in 60% of the animals. These effects probably do not result from direct nerve action, but represent a humoral action incidental to vasoconstriction and vasodilatation.—*D. G. Marquis* (Oxford, England).

[See also abstracts 5426, 5430, 5506, 5518, 5530, 5603, 5643, 5709.]

#### MOTOR PHENOMENA AND ACTION

5576. Ashkenaz, D. M., & Spiegel, E. A. The viscero-pannicular reflex. *Amer. J. Physiol.*, 1935, 112, 573-576.—A response consisting of a contraction of a thin sheet of muscle immediately under the skin, which results in movement of the skin of the lateral and dorsal parts of the thorax, was noted in cats on distention of the bladder and of the duodenum, but not from dilatation of the urinary bladder. It was also obtained by stimulation of the splanchnic nerves. It is held that the response is a spinal-cord reflex and that it will be useful for studying centripetal impulses from the viscera. It was discovered in experiments on visceral pain.—*T. W. Forbes* (N. Y. Psychiatric Institute).

5577. Banister, H. A study in eye dominance. *Brit. J. Psychol.*, 1935, 26, 32-48.—This inquiry, in which over 1000 infantrymen were tested, dealt with the effect of the dominant eye on shooting ability. The results showed that the men with right eye dominance had a considerable advantage, other things being equal, over other men when required to shoot from the right shoulder. The man with right eye dominance was also found to be on the whole a better soldier than the man with left eye dominance. The ability to shoot well appeared to lead to the development of a higher degree of soldierliness.—*M. D. Vernon* (Cambridge, England).

5578. Behnke, A. R., Thomson, R. M., & Motley, E. P. The psychologic effects from breathing air at 4 atmospheres pressure. *Amer. J. Physiol.*, 1935, 112, 554-558.—"Slowing of the process of cerebration" seen in divers working at great depths, was investigated by placing 9 men engaged in physiological research under high pressure in normal surroundings, the latter being aimed to eliminate possible emotionally upsetting effects of the deep-sea environment. The subjects were under increased pressure from 1.5 to 5 hours altogether at 25° C. and 50% humidity. Psychic reactions were evaluated by "subjective and objective reactions of men trained in animal experimentation," at 3 to 4 atmospheres (air). A feeling of alertness and euphoria was noted, together with some laughter and loquacity and the maintenance of normal behavior by the expenditure of some effort. Sensory acuity was unaffected, but responses to sensory cues were slowed. There was a tendency to fixation of ideas, recollection and association were accompanied by effort, and errors in arithmetic, notations of time, etc., occurred. Neuromuscular

activity decreased in efficiency, as shown by increased breakage of glassware, etc. At 10 atmospheres one worker showed what amounted to stupefaction, while with others efficient neuromuscular responses were abolished. However, irritability, drowsiness and fatigue occurred only after decompression and were eliminated by breathing oxygen, and were therefore attributed to the effect of nitrogen. It is pointed out that similar responses were found by McFarland at decreased oxygen pressures. However, since pure oxygen at from 1 to 4 atmospheres produced no euphoria and no immediate onset in a previous study by the same authors, the partial pressure of oxygen is not felt to be a significant factor and the narcotic effect of high pressures is attributed to nitrogen, which is highly soluble in lipid matter, as are ether and nitrous oxide. From a practical angle it is suggested that oxygen under high pressures should be diluted by gas of a low lipid solubility.—*T. W. Forbes* (N. Y. Psychiatric Institute).

5579. Brigden, R. L. The dynamics of spiral movement in man. *J. comp. Psychol.*, 1935, 20, 59-74.—The author asked such questions as "Why does a subject walk?", "Assuming that sufficient differentials of potential exist in the field to demand movement, where will the subject walk?", "What will be the pattern of a subject's course as he walks in a homogeneous field?", etc. Each question is followed by a prediction of what will occur, in the light of dynamic principles. Then there follows an experimental verification. The following are samples of the findings, reported in several statements of fact and inference: "Movement takes place only when there are potentials in a field. Movement is the means by which these potentials are balanced. Movement occurs in the shortest possible route under the existing circumstances of field structure. The more definite the goal, other things being equal, the more direct the course to it." The author claims that his results demonstrate the fruitfulness of the deductive-inductive method and of the organicistic position. Bibliography.—*N. L. Munn* (Pittsburgh).

5580. Chweitzer, A., Laugier, H., & Vahl, F. Comparaison du travail ergographique à rythme uniforme avec le travail à intervalle variable, pour une fréquence de soulèvements imposée. (Comparison of ergographic work at uniform rhythm with that at variable interval for a specified frequency of lifts.) *Travail hum.*, 1935, 3, 181-190.—Comparisons were made, for instance, between one contraction every 10 seconds and 2 contractions in quick succession every 20 seconds or 3 contractions in immediate succession every 30 seconds, i.e., with the same number per minute. Under some conditions the double or triple rhythm was superior to the single, but the relations are complicated. For instance, at 6 per minute the double is superior to the single, but at 12 per minute the difference disappears, although at this rate the triple is superior to the single. The critical variable may be the interval between the contractions or groups of contractions. The results are presented as preliminary.—*H. E. Burt* (Ohio State).

5581. Crider, B. Unilateral sighting preference. *Child Develpm.*, 1935, 6, 163-164.—Data are presented demonstrating the fact that by increasing the number of sightings and employing a very strict criterion of eye preference the percentage of impartial eyedness may be made to increase rapidly. Whereas with two trials 93% of the subjects used one eye consistently, with forty-five trials only 50% used the same eye throughout.—F. D. McTeer (Wayne University).

5582. Dalsgaard-Nielsen, T. Den naso-oculaere reflex. (The naso-ocular reflex.) *Ugeskr. f. Laeger*, 1935, No. 28, 734-736.—The writer discusses the naso-ocular reflex as described by Werne (*Acta Psychiat. neurol.*, 1927, 2 fasc. 3-4) and relates in detail the case of a 33-year-old woman patient exhibiting a peculiar reflex condition.—M. L. Reymert (Mooseheart Laboratory for Child Research).

5583. De Kleyn, A., & Versteegh, C. Näheres über die Auslösungsstelle der Labyrinthreflexe im peripheren Labyrinth. (Further study on the location of the release of the labyrinth reflexes in the peripheral labyrinth.) *Acta otolaryng.*, Stockh., 1935, 22, 327-337.—The right utricularis nerve in a rabbit was destroyed with a galvanic cautery. Following the operation the movement reflexes remained intact, but the tonic labyrinth reflexes were disturbed on the right side. For instance, when the head was held in a normal position, the left eye was higher than the right. Four and a half months later, the tonic reflexes were again present and a microscopic examination revealed a regeneration of the nerve. This experiment suggests a functional separation of the utriculus and the semi-circular canals, and localizes the release of the tonic reflexes in the utriculus and the movement reflexes in the semi-circular canals. Six plates.—M. B. Mitchell (New Hampshire State Hospital).

5584. Dzidzishvili, N. [Studies on the effect on the tibialis anterior muscle produced by the stimulation of the gastrocnemius muscle in frogs.] *Trud. biol. Sekt., Akad. Nauk SSSR, zakavkaz. Filial*, 1934, 1, 167-169.—On the basis of new experiments the author objects to the conclusion of Stein and Tulgan (*Amer. J. Physiol.*, 1925, 73, 480) that there must always be a reciprocal inhibition of the tibialis muscle during stimulation of the gastrocnemius. He finds that this effect takes place only under abnormal conditions. If the muscle is in a normal state the effect is never noticed.—R. Smith (Clark).

5585. Faddeyeff, —. [The problem of endurance.] *Sovetsk. Psichotekh.*, 1933, 6, 307-315.—The maximum induced current that an individual can endure is relatively stable but does vary somewhat with the organic state.—H. E. Burtt (Ohio State).

5586. Fessard, A., Laugier, H., & Monnin, J. Force et ténacité au cours de l'entraînement. (Force and tenacity during training.) *Travail hum.*, 1935, 3, 165-174.—Force was measured by the maximum squeeze on a dynamometer; tenacity by the time the indicator could be held at a point where the force was  $\frac{3}{4}$  of the maximum. A practice effect is apparent

in both measures. The two are somewhat independent. The two hands differ considerably more in the measure of force than in that of tenacity.—H. E. Burtt (Ohio State).

5587. Fromm, B., & Nylén, C. O. Cinematograph film of positional nystagmus. *Acta otolaryng.*, Stockh., 1935, 22, 370-373.—Two photographs are reproduced of the apparatus used for photographing positional nystagmus. The camera is so placed that it is always in the same position relative to the eyes of the subject no matter how the position of the subject is changed, and it can be used while in motion. The eye movements were photographed with the patient in upright, dorsal, ventral, lateral and upside-down positions.—M. B. Mitchell (New Hampshire State Hospital).

5588. Gellhorn, E., & Spiesman, I. The influence of hyperpnea and of variations in the O<sub>2</sub>- and CO<sub>2</sub>-tension in the inspired air upon nystagmus. *Amer. J. Physiol.*, 1935, 112, 662-668.—Nystagmus was employed as a typical brain-stem reflex in order to determine whether or not effects previously found with cortical functions (visual and auditory processes) also occurred in non-cortical regions. Water at 28° to 30° C. was introduced into the external auditory meatus and the nystagmic movements counted. 6 subjects were employed after training. 4 to 7% carbon dioxide gave a slowing of nystagmic movements, hyperpnea gave a clear-cut increase, and oxygen lack of 8 to 10% of O<sub>2</sub> gave decreased nystagmus, but less than with CO<sub>2</sub>. 9½ to 10½% oxygen-nitrogen mixtures gave no clear-cut change. The results are interpreted as indicating that the cortex is more affected than subcortical structures.—T. W. Forbes (N. Y. Psychiatric Institute).

5589. Gesell, R., & Moyer, C. Is breathing fundamentally a reflex phenomenon? *Quart. J. exp. Physiol.*, 1935, 25, 14-31.—The experiments reported indicate that breathing may be fundamentally a reflex phenomenon. The results, however, are not absolutely opposed to the view that breathing is mediated by an automatically discharging center under the influence of chemical and afferent nerve-impulse changes.—L. Carmichael (Brown).

5590. Ghosh, S. Child psychology (play instinct). *Indian J. Psychol.*, 1934, 9, No. 3-4, 72-76.—"Play is the highest kind of human development and it is the spontaneous expression of what is within."—H. Schlosberg (Brown).

5591. Gibbs, F. A., Gibbs, E. L., & Lennox, W. G. The cerebral blood flow during sleep in man. *Brain*, 1935, 58, 44-48.—Observations of the cerebral blood flow in man were made by means of a thermo-electric blood flow recorder inserted into an internal jugular vein. The onset and termination of sleep in subjects without sleep disorder and in one patient with narcolepsy were not accompanied by a significant change in the flow of blood through the brain.—D. G. Marquis (Oxford, England).

5592. Gladstone, S. A. Effect of posture and prolonged rest on the cardiac output and related functions. *Amer. J. Physiol.*, 1935, 112, 705-713.—A determination of cardiac output was made by a

technique based on the foreign-gas principle, in which the time for the determination of oxygen difference was so short as to eliminate errors from recirculation. With 6 men as subjects it was found that the cardiac output was from 10 to 25% higher in the recumbent position when compared with sitting. The cardiac output decreased progressively after the basal metabolic rate had become constant during rest.—*T. W. Forbes* (N. Y. Psychiatric Institute).

5593. Hellebrandt, F. A., Brogdon, E., & Hoopes, S. L. The disappearance of digestive inhibition with the repetition of exercise. *Amer. J. Physiol.*, 1935, 112, 442-450.—Six adult women, physical education students, habituated to exercise, underwent stereotyped bicycle pedalling, and gastric secretion was studied by taking samples at 15-minute intervals by stomach tube. Secretion was stimulated by 7% alcohol or by histamine injections. The object of the procedure was to eliminate as far as possible the psychic factor in the work, which was thought to be responsible for an initial depression of gastric function in a previous study. Two subjects, who pedalled practically to the limit of endurance, showed a disappearance of the inhibition of gastric function on initiation of work by the sixteenth day. A public demonstration (calculated to have an emotionally exciting effect), boxing almost to exhaustion before the test exercise on the 44th day, and exercise to the point of cardiac enlargement in three different subjects produced no gastric depression. No significant suppression of the secretory response to the powerful stimulation produced by histamine was obtained. It was not found possible to demonstrate any gastric inhibition by the emotional stress assumed to occur immediately before an athletic contest. It is suggested that the disappearance of inhibition occurs too early to be a training effect in the ordinary sense, and that the athletes, being trained to acquire quickly individualized responses from the general initial response to a situation, probably did so viscerally as well. The results are interpreted as indicating that exercise itself is without influence, but that inhibition of gastric function is due to irradiation of impulses into the pathways characteristic of psychic stress. It is also pointed out that gastric functions operate in spite of the relative anemia of the alimentary tract due to a redistribution of blood.—*T. W. Forbes* (N. Y. Psychiatric Institute).

5594. Hellebrandt, F. A., Brogdon, E., & Hoopes, S. L. The effect of acute anoxemia on hunger, digestive contractions and the secretion of hydrochloric acid in man. *Amer. J. Physiol.*, 1935, 112, 451-460.—In order to study the effect of relative anoxemia of the stomach the whole organism was subjected to oxygen want. Rebreathing in a closed-circuit apparatus to which the desired amount of oxygen was admitted continuously was the method used. Stimulation of secretion was obtained by oatmeal gruel, 7% alcohol or histamine injection. 15-minute samples were taken and blood pressure recorded kymographically; the subject was maintained on "the verge of consciousness." 7 to 12% O<sub>2</sub> was found

to have relatively little effect on secretion, although the response to gruel seemed more readily suppressed than the others. Hunger and digestive motility showed greater inhibition, but this was transitory and the degree of change was never very marked. "Cerebral manifestations" and cardiac dysfunction occurred before significant change of gastric function. It is concluded that gastric inhibition during exercise cannot be due to alimentary oxygen want, and is probably a direct inhibition through the sympathetic system.—*T. W. Forbes* (N. Y. Psychiatric Institute).

5595. Heymans, C. Activité musculaire et circulation. (Muscular activity and circulation.) *Travail hum.*, 1935, 3, 191-199.—A review of 10 articles dealing with factors which affect heart rate in a preparation or *in situ*. The part played by the sympathetic system and the chemistry and temperature of the blood are described.—*H. E. Burt* (Ohio State).

5596. Isikawa, T. Experimental studies on the day and night inversion of daily routine. *Rep. Inst. Sci. Labour, Kurashiki*, 1934, No. 25. Pp. 14.—This investigation was concerned with the course of bodily temperature as a function of day and night work. It was found that hourly variations of body temperature for twenty-four hours gave curves of almost the same type every day. For the day workers the temperature increased gradually during the day and then decreased gradually from night to morning during sleep. For the night workers, however, the temperature decreased gradually during the night and also went down very slowly from morning till evening during sleep. The decrease during the night work was very slight, and therefore indicated a tendency toward the inversion expected on the basis of the findings for the day workers.—*R. Smith* (Clark).

5597. Kempf, E. J. Physiology of attitude—emergence of ego-organization. *Med. Rec., N. Y.*, 1935, 142, 115-117.—(Seventh installment.) The influence of the blood in consequence of its physicochemical constitution upon the attitudinal-affective state is elaborated. Cannon's studies on the physiology of states of fear and rage are discussed. Cantril and Hunt are cited in regard to their work on the subjective emotional changes arising from the injection of adrenalin. The need of adequate analysis of behavioral and attitudinal states to permit a correct evaluation of the causative factors in the emotional changes is emphasized by the author. A 9-item bibliography is appended.—*M. H. Erickson* (Eloise Hospital).

5598. Kempf, E. J. Physiology of attitude—emergence of ego-organization. *Med. Rec., N. Y.*, 1935, 142, 220-222.—(Ninth installment.) The special autonomic segmental and systematic work contributing characteristic affective cravings and affective tone to attitude is discussed in detail, and illustrated by examples of the affective feeling tones, such as hunger or genital desire, generated in the personality by the contribution of afferent impulses arising from the functioning of all muscular autonomic organs. The author then elaborates upon the generalized attitudinal states arising from circulatory-hemato-

poietic changes, such as vasodilatation or vasoconstriction (local or generalized), substantiating his points from the experimental observations of vascular changes in the brain during changing emotional states as reported particularly by Lange, Mosso, and Robbins. He discusses further the integrative actions of the central nervous system as regulated by centripetal nervous impulses from peripheral muscular and glandular actions serving to stimulate sense organs.—*M. H. Erickson* (Eloise Hospital).

5599. Kruta, V. Sur un nouveau mode d'enregistrement de la fatigue musculaire. (A new method of recording muscular fatigue.) *Travail hum.*, 1935, 3, 175-180.—The author claims that running the kymograph more slowly (1 cm. in 30 or 40 seconds) during periodic stimulation of frog muscle preparation gives a record that can be interpreted in more fruitful fashion.—*H. E. Burtt* (Ohio State).

5600. Kučera, E. Experimentelle Beiträge zur Charakteristik von Willensstufen. (Experimental contributions to the characterization of degrees of will.) *Acta Inst. psychol. Univ. zagreb.*, 1933, 1, No. 3. Pp. 36.—Using the Bonn experimental procedure for the investigation of the will in choice reactions, in which the subject might choose between pressing a key and operating an ergograph, the author instructed the subjects to describe their experience fully and to indicate whether or not it had presented itself to them as something voluntary. The observers spontaneously reported a series of steps from the non-voluntary reaction of reflex type to the fully voluntary action. These steps represent not different degrees of intensity of will but qualitatively different modes of activity. According as the ego or personality is felt to be the sole cause or merely a joint cause of the activity or as not really participating in the activity, this activity is characterized as more or less voluntary or as not voluntary. After eliminating purely verbal distinctions, the author found that there are eight qualitatively different kinds of activity.—*M. F. Martin* (West Springfield, Mass.)

5601. Leiri, F. Über den elektrischen Erregungsvorgang im Vestibularapparat bei adäquater Reizung. (Electrical excitation in the vestibular apparatus with adequate stimulation.) *Acta otolaryng.*, Stockh., 1935, 22, 348-359.—The dissertation is divided into two parts: (1) the electrical excitation in the otolith apparatus, and (2) the electrical excitation in the semi-circular canals of the inner ear. Bibliography.—*M. B. Mitchell* (New Hampshire State Hospital).

5602. Löwenstein, O. Die Störungen des Lichtreflexes der Pupille bei denluetischen Erkrankungen des Zentralnervensystems. Beiträge zur Frühdiagnostik des Lues nervosa. (Disturbances of the pupillary light reflex in luetic diseases of the central nervous system. Contributions to the early diagnostics of neurosyphilis.) Basel: Schwabe, 1935. Pp. 92. Fr. 5.—*R. R. Willoughby* (Clark).

5603. Lucas, A. M. Neurogenous activation of ciliated epithelium. *Amer. J. Physiol.*, 1935, 112, 468-476.—*T. W. Forbes* (N. Y. Psychiatric Institute).

5604. Max, L. W. An experimental study of the motor theory of consciousness. III. Action-current responses in deaf mutes during sleep, sensory stimulation and dreams. *J. comp. Psychol.*, 1935, 19, 469-486.—Action-current photographs taken from the peripheral musculature of deaf mutes during undisturbed sleep, external stimulation and dreams showed that the transition from the waking to the sleeping state is accompanied by a progressive diminution of action currents, that sleep results in the complete absence of action-current activity in only a small proportion of the cases, that external stimulation during sleep tends to evoke action currents, and that the onset of dreams can be detected in most instances by the appearance of large action-current responses in arm and finger muscles. The diminution of action-current activity with the approach of sleep was also found for hearing subjects. These subjects, however, gave no action currents from the fingers during dreams. Several further problems are outlined. Bibliography.—*N. L. Munn* (Pittsburgh).

5605. Mazo, —, & Zavelevich, —. [Constructional activity of pupils in a special school.] *Sovetsk. Psichotekh.*, 1933, 6, 68-78.—Pupils with an average IQ of 75 were tested with toy "construction sets." At first they were instructed to make anything they wished; later to make a wagon. The examiner noted their individual procedure. Normal children adopted more complex designs than the backward. The authors claim that the test has diagnostic value.—*H. E. Burtt* (Ohio State).

5606. Mester, J. Az önuralom lélektana. (The psychology of self-control.) *Mag. psychol. Szé*, 1934, 7, No. 1/2, 89-99.—A knowledge and application of the laws and rules of practical psychology are necessary to obtain a mastery of thought and volition over drives and passions. The structure of practical mental life consists of four types of reflex arcs: physiological, sensory, spontaneous and reflective-mental. In this structure we distinguish three relationships: (1) knowledge arouses feelings, tendencies, action; (2) consciously executed expressive movements (action) arouse corresponding feelings and tendencies; (3) the controlled feelings and tendencies (as per 1 and 2) give inspiration to our knowledge and youthful force to our action.—*H. Beaumont* (Kentucky).

5607. Paterson, A. S. The depth and rate of respiration in normal and psychotic subjects. *J. Neurol. Psychopath.*, 1934, 14, 323-331.—25 melancholic patients, 121 schizophrenics and 62 normal subjects were examined as to the depth and rate of respiration by means of the plethysmographic apparatus of Golla. The schizophrenics were found to breathe more shallowly and more rapidly than the normals, the difference being statistically significant. This difference was not found in the melancholic patients. The significance of this inefficient type of respiration to the understanding of schizophrenia is discussed.—*D. G. Marquis* (Oxford, England).

5608. Peters, H. N., & McGeoch, J. A. The relationship between time spent in the culs-de-sac of a

**stylus maze and speed of elimination.** *J. exp. Psychol.*, 1935, 18, 414-430.—Analysis of the records of 30 college students who learned the Warden 10-alley maze to a criterion of three perfect trials in succession leads the author to the following conclusions: (1) An inverse relationship exists between the length of time spent in a cul-de-sac and the difficulty of its elimination. (2) The percentage of time spent in the true path and in the blind alley is, in terms of the average for all subjects, nearly a constant, no matter what the time spent in total learning. (3) Serial position effects operate in the learning of a skilled act, but they are not of the same nature as those operating in the memorizing of lists of verbal material. Although there is a general primacy-finality effect, as shown by the average values for the first, last and middle alleys, the effect is not a regular one. (4) The obtained inverse relation between length of time spent in a blind alley and the speed of its elimination may be explained in terms of the greater amount of detrimental sensory consequences which the longer time provides. A factor of temporal extent must be added to those influencing learning.—*H. W. Karn* (Clark).

**5609. Pike, F. H. Vitalism, irritability and perpetuum mobile.** *Science*, 1935, 82, 300-301.—"We would probably get along faster and acquire somewhat clearer ideas of the processes involved" in measuring irritability (the reciprocal of work) "if we were to consider the general case of two or more agents acting simultaneously upon a tissue or organism from the point of view of work done upon the system, even though our measurements at present are inadequate to give the notion quantitative exactness, than we would if we were to retain the seventeenth-century concept of irritability and invent new words to show how the postulate of perpetual motion is to be avoided."—*R. Goldman* (Clark).

**5610. Robinson, E. S. Play.** *Encycl. soc. Sci.*, 1934, 12, 160-161.—"Theories" of play are attempts to summarize its chief characteristics.—*L. A. Riggs* (Clark).

**5611. Roos, M. M. A study of some factors entering into the determination of handedness.** *Child Develpm.*, 1935, 6, 91-97.—Correlation of clinical prenatal observations with subsequent tests of handedness of 486 young children indicates that there is no causal relationship between handedness and dominant fetal position, basal metabolism of the pregnant mother, or birth weight of the infant. There are in the data indications of a relationship between heredity and dexterity.—*F. D. McTeer* (Wayne University).

**5612. Sacks, J., & Sacks, W. C. Carbohydrate changes during recovery from muscular contraction.** *Amer. J. Physiol.*, 1935, 112, 565-572.—*T. W. Forbes* (N. Y. Psychiatric Institute).

**5613. Smith, S. The principle of specific conditioners.** *J. genet. Psychol.*, 1935, 46, 296-302.—A stylus-maze experiment was conducted in which the mazes had two kinds of floor, one plane and the other uneven in a random manner that provided specific proprioceptive patterns or cues for each turn. It

was found that the uneven floor was favorable to learning, in spite of its being somewhat distracting. This is in line with Guthrie's theory of specific conditioners, which is contrasted with that mistaken interpretation of the theory which emphasizes simply additional conditioners.—*J. F. Dashiell* (North Carolina).

**5614. Tatulov, G. Pavlov y a psychologia científica.** (Pavlov and the scientific psychology.) *Rev. Neurol. Psychiat. S. Paulo*, 1935, 1, 272-274.—A commentary upon the theoretical significance of the doctrine of conditioned reflexes.—*R. M. Bellows* (Ohio State).

**5615. Thomas, M. L'instinct, théories, réalité.** (Instinct; theories and reality.) *Rev. Quest. sci.*, 1933, 382-415.—*R. R. Willoughby* (Clark).

**5616. Tiitso, M. Hingamise propriotseptiivne regulatsioon.** (The proprioceptive regulation of respiration.) *Tartu: "Postimehe,"* 1932. Pp. 7.—*R. R. Willoughby* (Clark).

**5617. Tolosa, A. Dissociação do reflexo cremasterico.** (Dissociation of the cremasteric reflex.) *Rev. Neurol. Psychiat. S. Paulo*, 1934, 1, 31-40.—The author's observation of a case of tabes in which the cremasteric reflex could not be obtained by deep compression of the muscle groups led to the hypothesis that the abolition of the reflex is a constant feature of sensitive dissociation in tabes. A centripetal physiological theory is offered.—*R. M. Bellows* (Ohio State).

**5618. Wilson, W. C. Some aspects of sweat secretion in man: with special reference to the action of pilocarpine.** *Brain*, 1934, 57, 422-442.—The production of sweat secretion by injections of pilocarpine is due in man to peripheral action on the glands. These results support the view that the human sweat glands, like those of the cat, are supplied by cholinergic sympathetic fibers, and they furnish evidence against the belief that the human sweat glands have a double innervation.—*D. G. Marquis* (Oxford, England).

[See also abstracts 5421, 5450, 5458, 5477, 5488, 5492, 5499, 5504, 5521, 5522, 5530, 5538, 5541, 5542, 5544, 5547, 5548, 5550, 5551, 5561, 5565, 5568, 5569, 5571, 5572, 5573, 5575, 5627, 5632, 5636, 5643, 5671, 5674, 5688, 5711, 5715, 5727, 5820, 5928, 6020, 6025, 6029, 6030, 6038, 6041, 6047.]

#### PLANT AND ANIMAL BEHAVIOR

**5619. Beritoff, I., & Chichinadze, N. [On the reaction to achromatic color stimulus in hens.]** *Trud. biol. Sekt., Akad. Nauk SSSR, zakavkaz. Filial*, 1934, 1, 165-167.—*R. Smith* (Clark).

**5620. Bierens de Haan, J. A. Die tierpsychologische Forschung. Ihre Ziele und Wege.** (Animal psychology research; its goals and methods.) Leipzig: Barth, 1934. Pp. 96. RM. 6.60.—The author of this work on animal psychology is of the opinion that this investigation should be made by biologists, who alone are in a position to understand the nature and behavior of animals and to recognize with accuracy, on all the rungs of the animal ladder, sensations and

perceptions, impulses and instincts, memory and intelligence. The various conceptions of the presence of psychic phenomena in animals are summarized as follows: (1) some, such as Descartes, deny all mental life to animals; (2) the objectivists, such as Beer, Bethe, and von Uexküll, claim that the mental life of animals cannot be observed and hence cannot be the object of scientific study; (3) others, such as Edinger, von Lukas, Yerkes, attribute a mental life only to some animals; (4) and a fourth group, such as Wundt and Claparède, admit a mental life in all animals. Next the author studies the various methods of animal psychology: the anecdotal method of Plutarch, Pliny, Montaigne, Brehm, Darwin and Romanes; the investigating method of Edinger and Stratton; the observational and experimental method developed recently. As to the interpretation of animal behavior, this is possible only by means of empathy or insight.—R. E. Schwarz (V. A. Facility, Northampton, Mass.)

**5621. Bousfield, W. A. Quantitative indices of the effects of fasting on eating-behavior.** *J. genet. Psychol.*, 1935, **46**, 476-479.—Eating curves for rats after a four-day fast as compared with those of controls showed a reduction in physiological limit of capacity for food. This is consistent with certain other physiological facts.—J. F. Dashiell (North Carolina).

**5622. Burge, W. E., & Wickwire, G. C. The effect of the performance of work upon *Mimosa*.** *Science*, 1935, **82**, 304-305.—The method of making the leaf of *Mimosa pudica* perform physical work or so-called exercise was to attach weights to the leaf and stimulate it by striking the junction of the four primary leaflets. This caused the leaf to drop, and when it rose again physical work was performed by raising the weight. 115 mg. were added to the load each day for five days; then for five days the total load was decreased by the same amount. At the end of the exercise days, a 575-mg. weight was suspended to each of the exercised leaves as well as the unexercised leaves of the same plant. The exercised leaves performed 41% more work than the unexercised ones (2874 ergs vs. 2029 ergs). Exercise was found to increase the capacity of the leaves for work and to render them more difficult to fatigue.—R. Goldman (Clark).

**5623. Carmichael, L., & Coronios, J. D. Behavior inventory of the fetal guinea-pig.** (Film.) Providence, R. I.: Psychological Laboratory, Brown University, 1934. 1 reel, 400 ft., 16 mm. Rental and purchase prices on request.—A silent film, adequately titled, showing typical stages in the development of behavior in the fetal guinea-pig. The film begins with pictures of the fetus just before the onset of behavior. Sequences are then selected to show very early responses and later developmental stages, separated by a few days each, up to the period of normal birth. These sequences illustrate the early onset of discrete reflexes and the later appearance of so-called mass-movements. In later stages an increase in precision and speed of response and the increasing accuracy of

the localizing movements made by the limbs toward points stimulated are shown. The general progress of response from the head region to the rump is also illustrated, as are certain other "developmental laws." —L. Carmichael (Brown).

**5624. Coronios, J. D., Schlosberg, H., & Carmichael, L. The prenatal development of behavior in the cat.** (Film.) Chicago: C. H. Stoelting Co.; Providence, R. I.: Psychological Laboratory, Brown University, 1933. 1 reel, 400 ft., 16 mm. Rental and purchase prices on request.—An adequately titled silent film showing the technique of preparing the adult animal so that the fetal organisms may be observed under approximately normal conditions. Following this demonstration, selected stages of fetal reactions from the 22d gestation day up to and including a few sequences of air-breathing kittens are given. The film illustrates the general course of behavioral development in a typical mammalian fetus and shows something of the onset of reflexes and so-called mass-behavior.—L. Carmichael (Brown).

**5625. Cruze, W. W. Maturation and learning in chicks.** *J. comp. Psychol.*, 1935, **19**, 371-409.—In five groups, each consisting of 25 chicks, pecking was delayed for, respectively, 24, 48, 72, 96, and 120 hours. Artificial watering and feeding were carried out in darkness to avoid visual habits which might interfere with later tests. The 25 daily tests were scored with a high degree of reliability (*r*'s .52 to .98) in terms of missing, hitting, seizing, and swallowing. For the above groups unlimited practice followed the initial test. Their initial accuracy was low, regardless of the delay, but accuracy improved rapidly with practice and reached a peak of about 80% at the end of three weeks. The chicks which started pecking when older improved more rapidly than those which started pecking at an earlier age. So far the results agreed with those of Shepard and Breed. Results obtained with three further comparable groups of chicks given restricted practice indicate that the interpretations placed upon their data by Shepard and Breed were incorrect. The improvement after the first few days, which these authors believed due to maturation, did not appear when practice was greatly restricted. It appeared to a greater extent with greater amounts of practice. The author's most significant conclusions are: "Maturation during the first five days . . . seems to be sufficient explanation for the reduction and near elimination of missing errors. . . . Accuracy in the total response including the consummatory response of swallowing seems to be very definitely the result of learning." Bibliography.—N. L. Munn (Pittsburgh).

**5626. Dennis, W., & Gersoni, C. S. The effect of blindness upon a perfected elevated maze habit of the albino rat.** *J. comp. Psychol.*, 1935, **19**, 411-416.—After 30 rats trained on an elevated maze had reached a high level of accuracy, half of them were blinded. Whereas the normal rats continued to improve over their former level of performance, the blinded animals manifested a very great increase in errors. There were 370 post-operative errors for the blinded rats as compared with 16 for the normal ones. The blindness

led to a new distribution but no stereotyping of errors. The authors believe, in the light of different results found by previous investigators, that the sensory control of the maze must be highly specific to a given experimental situation. Bibliography.—*N. L. Munn* (Pittsburgh).

5627. Elliott, M. H., & Treat, W. C. Hunger contractions and rate of conditioning. *Proc. nat. Acad. Sci., Wash.*, 1935, 21, 514-516.—The effects of hunger contractions are hypothetically identified with those of the muscular tension known to increase learning efficiency, and the relation between hunger contractions and rate of conditioning in white rats is investigated. The onset of periodic activity is found to be satisfactory for use as an index of the contractions, and the jumping response in two groups of rats is conditioned to a light stimulus. In one group (8 animals) the conditioned stimuli are presented with the unconditioned (electric shock) at the beginning of an outburst of activity near the end of a 24-hour fast; in the other group (7 animals) the hunger contractions are eliminated by a small amount of food given just prior to conditioning. The results show a distinct difference in number of combined stimulations necessary in the two groups, the animals without contractions requiring about twice as many as those with contractions. It is concluded that "the occurrence of hunger contractions favors learning; and thus we fill in a lacuna in our information about the dependence of learning upon muscular tension in general."—*F. S. Keller* (Colgate).

5628. Overall, E. E. Perseveration in the rat. *J. comp. Psychol.*, 1935, 19, 343-369.—The nature of the responses precipitated by certain forms of punishment and restriction of activity were investigated. In some experiments rats were trained, to different levels of mastery, to turn to the right after emerging from the central alley of a T-shaped maze. They were then trained to turn to the left. Rats shocked while approaching the choice point tended to persist in the right-turning habit much more than rats which were not shocked, but which had received more training on this response. Experiments patterned after some of Lewin's showed that obstruction of activity in the direction of a goal aroused emotional reactions (attack, defecation, urination, etc.) and tended to precipitate reversion to former modes of response. The "hypotheses" aroused in an insoluble discrimination problem with and without emotional disturbance were fewer for the emotionally excited rats than for the normal ones. It appeared that the emotional situation tended to fixate certain earlier hypotheses, thus preventing a more varied type of adjustment. Other variations of these experiments all lead to the same conclusion; namely, "that a very intimate connection exists between perseveration and emotional disturbance." Bibliography.—*N. L. Munn* (Pittsburgh).

5629. Fischel, W. Experiments with two goals and two possibilities of action. *J. comp. Psychol.*, 1935, 19, 339-342.—The tortoise *Chelydra serpentina* learned to approach suspended food from below rather than

from the side of a cage. The food was constantly in view. The animal did not learn to use one method of approach for a mealworm and the other for an earthworm, which was less preferred. On the other hand, dogs learned to open a cage in one way for meat and in another way for bread. This was true only when the food was visible. The author says, "The dogs have remembered very well how they have opened . . . a wire door, but when the food was not visible, they have not remembered what they have obtained as the result of the action."—*N. L. Munn* (Pittsburgh).

5630. Hammond, J. C. Stroboscopic observation of ciliary movement in the protozoa. *Science*, 1935, 82, 68-70.—Studies have been made on *Vorticella microstomata*, *Paramecium caudatum*, *Epistylis* sp., and *Stentor coeruleus*. "The forms studied from rundown cultures showed the least variation in frequency of ciliary beat. The variations found in forms from flourishing cultures may be correlated in some way with division, thus suggesting a new approach to the problem of the relation of division to vitality." The low speeds of coordinating impulse found are so far below the velocities of true neural impulses that it is not possible to consider a "neuro-motor" factor in the coordination of these protozoa.—*R. Goldman* (Clark).

5631. Hasuo, C. Einfluss vom Milieu auf den Charakter. I. Experimente mit jungen Hühnern. (Effect of milieu upon character. I. Experiments with young chickens.) *Jap. J. exp. Psychol.*, 1935, 2, 109-118.—*R. Kuroda* (Keijo).

5632. Hunter, W. S. Conditioning and maze learning in the rat. *J. comp. Psychol.*, 1935, 19, 417-424.—Blind rats were conditioned, in an octagonal box containing four compartments with a grill at each end, to run from one grill to another within two seconds after the sounding of a buzzer. The shock was avoided whenever the appropriate movement was made. The buzzer was sounded every minute. There was a careful control of extraneous stimulation. 32 rats were conditioned in this situation, and then 17 of them underwent extinction trials. About two months later, after preliminary training, the rats were trained to an accuracy of three successive trials without error on a seven-unit elevated maze. There was, for the 32 animals, a correlation of .33 between forward-going errors and conditioning trials. Thus quick conditioners appear to be quick maze learners and slow conditioners slow maze learners. For the 17 rats which underwent conditioning, extinction, and maze learning, the coefficients of correlation and scatter diagrams indicate that slow maze learners are also slow in conditioning, but quick in extinction. Quick maze learners tend to be quick conditioners but slow in extinction. Predictions concerning the relationship between conditioning and extinction are more reliable for slow than for quick conditioners.—*N. L. Munn* (Pittsburgh).

5633. Kennedy, J. L., & Smith, K. U. Visual thresholds of real movement in the cat. *J. genet. Psychol.*, 1935, 46, 470-476.—A method of testing for discrimination of movement by the cat takes the form

of two ground glass boxes on each of which a cross is thrown, one rotating at controlled speeds. Thresholds of real movements are determined in degrees of angle per second, or in cm. per second of a point on the circumference of the moving cross, when the animal chooses it in 75% of trials. The obtained thresholds are lower than those of the rat.—J. F. Dashiell (North Carolina).

5634. Klein, K. Über die Helligkeitsreaktionen einiger Arthropoden. (On the brightness reactions of certain arthropods.) *Z. wiss. Zool.*, 1934, 145. Pp. 38.—R. R. Willoughby (Clark).

5635. Krechovsky, I. Brain mechanisms and "hypotheses." *J. comp. Psychol.*, 1935, 19, 425-468.—100 rats divided into three groups were trained on an insoluble discrimination problem, the aim being to ascertain the differences in method of attack upon the problem between normal and cortically injured animals. In line with the author's previous analysis of the reactions of rats to insoluble problems, the methods of attack are designated as "hypotheses," as "attempted solutions." Cortical destruction diminished the number of "hypotheses," decreased the complexity of the "hypotheses" used, and decreased the plasticity of these relatively simple "hypotheses." Cortical destruction changed or reversed the preference for certain types of "hypothesis." These phenomena are found not to be correlated with the amount of cortical tissue destroyed, but are shown to be a complex function of at least two anatomically delimited cortical areas. From a consideration of this last point and other independent data some suggestions are made for a modified dynamic hypothesis of brain action. This hypothesis attempts to reconcile the facts of functional specialization in the brain with the facts and principles of the 'field' theories, by postulating the presence of anatomically localized 'structuring' areas in the brain." Bibliography.—N. L. Munn (Pittsburgh).

5636. Maslow, A. H. Appetites and hungers in animal motivation. *J. comp. Psychol.*, 1935, 20, 75-83.—In this critical review of previous work on animal motivation the author "reemphasizes the neglected dichotomy between hunger and appetite," points out "the significance, in this connection, of the various studies that have been made on food-preferences," and discusses "the practical implications, for animal experimentation, of these and other data, with special reference to the necessity for controlling the appetite factor as well as the hunger factor." Bibliography.—N. L. Munn (Pittsburgh).

5637. McCulloch, T. L. The selection of the intermediate of a series of weights by the white rat. *J. comp. Psychol.*, 1930, 20, 1-11.—Rats were trained to pull in a weight of 75 grams when it was paired with either 25 or 150 grams. A food reward was associated with the 75-gram weight. A control group was trained with the reward associated for half of the trials with the 75-gram weight and for the other half with either the 25- or 150-gram weight. The behaviors of these two groups when confronted with a heavier series of weights (150 grams paired with either 75 or 262.5

grams) were then compared. At first there was a tendency to draw in the lighter weight of a pair. Rapidly, however, this tendency decreased. The tendency to draw in the middle weight of the series rapidly increased. The experimental group showed a greater tendency to pull in the middle weight than did the control group. Some of the animals, when returned to the original series, selected the intermediate weight with great accuracy. It is concluded that "the learned response was in part a function of the absolute properties of the intermediate stimulus and in part a response to a stimulus a functionally significant property of which was its membership in a series which was only in part sensorially present on any one trial." Bibliography.—N. L. Munn (Pittsburgh).

5638. McQueen-Williams, M. Maternal behavior in male rats. *Science*, 1935, 82, 67-68.—Chronic administration of bovine anterior pituitary implants, or complete thyroidectomy without treatment, induced adult male rats to make nests and care for young rats, lick them in a maternal way, etc. The pituitaries of the experimental animals were considerably enlarged. No mammary development was observed in the thyroidectomized males.—R. Goldman (Clark).

5639. Mookherji, N. Reactions of goldfish to colours. *Indian J. Psychol.*, 1934, 9, No. 1-2, 69-78.—A multiple-choice situation was used, containing four stalls. Each stall was lighted by a candle shining through a piece of colored glass. The number of entrances and the time spent in each stall by four goldfish during 15 hours were tabulated. On the average, blue was favored, then green, yellow, and red, in that order.—H. Schlosberg (Brown).

5640. Moore, H., & Mathias, E. The effect of vitamin A and B deficiency on the maze-learning ability of the white rat. *J. comp. Psychol.*, 1935, 19, 487-496.—Three groups, consisting of 8 rats each, were trained on Lashley's maze III. One group was deficient in vitamin A, one group in vitamin B, and the other in neither vitamin. The "learning ability" varied depending upon whether the criterion of learning consisted of two, three, or five successive errorless trials. Complete vitamin A deficiency made it impossible to work with the rat for longer than 15 days. Vitamin B deficiency led to a slowing down of activity and absence of response to any incentive. Both A and B deficiency led to pronounced anorexia. Bibliography.—N. L. Munn (Pittsburgh).

5641. Muenzinger, K. F., & Newcomb, H. Motivation in learning. III. A bell signal compared with electric shock for right and wrong responses in the visual discrimination habit. *J. comp. Psychol.*, 1935, 20, 85-93.—"Two groups of rats were taught a black-white discrimination habit with hunger-food tension. One group received a buzzer signal during wrong and the other during right responses. As compared with three similar groups of a previous experiment the learning efficiency of the two buzzer groups was more like that of the group that was given only food than that of the groups that were shocked during wrong and right responses. A buzzer signal evidently does

not have the same accelerating effect in the visual discrimination habit as electric shock, if it has such an effect at all. If the chief effect of a buzzer signal is a disturbing one we might conclude that the accelerating effect of electric shock is not due to its disturbing quality. At any rate, the effect of shock is not due to a quality it has in common with the buzzer signal." Bibliography.—*N. L. Munn* (Pittsburgh).

**5642.** Muenzinger, K. F., & Wood, A. Motivation in learning. IV. The function of punishment as determined by its temporal relation to the act of choice in the visual discrimination habit. *J. comp. Psychol.*, 1935, **20**, 95-106.—Two comparable groups, each consisting of 25 white rats, were trained to discriminate white from black in a T-shaped box. For one group electric shock was administered just before and for the other just after the act of discriminating. The former group was divided into two sub-groups, each being given the shock at a different location. The results for these groups of rats were compared with those for comparable groups trained with shock for correct responses, with shock for incorrect responses, and with no shock. It is clearly indicated by the data that, although a former experiment showed an electric shock to accelerate learning, the efficacy of punishment is definitely related to the point at which it is administered in the discrimination box. The group shocked *after* making the choice was much better than a former group run with food alone, whereas the group shocked *before* making the choice was no better than the former group. Comparisons were in terms of number of errors in the first 100 trials and number of trials to reach the criterion of discrimination. The authors conclude that when shock is presented before choice it has no effect upon learning. The bearing of these results on the law of effect and the goal gradient hypothesis is discussed.—*N. L. Munn* (Pittsburgh).

**5643.** Odani, S. Experimental studies upon brain mechanisms in learning. II. The retention of auditory-motor habit after cerebral injuries. *Jap. J. exp. Psychol.*, 1935, **2**, 129-166.—With a modified version of the Yerkes-Watson discrimination box the author trained 16 albino rats to avoid a wrong alley which was connected with a noise. Several areas of their cerebral cortex were destroyed after learning had been completed, and a retention test was performed. Extent of cerebral lesion and degree of amnesia were checked. It was ascertained that the formation and retention of the auditory habit do not reveal any dependence upon definite cortical areas, which shows equipotentiality of various parts of the cerebrum in this function. Postoperative disturbance of retention is, when it appears, to some degree proportional to the amount of lesion, irrespective of the loci of lesions, though it is very slight in its degree. It seems possible that long-practiced habits are reduced to subcortical levels, that is, those habits which originally involved the cortical action are wholly taken in charge by lower centers. But it is also admitted that the cerebral hemispheres do exert some sort of influence in a non-localizable way and without actually contributing to

specific integrations. So the habit seems to be formed and retained primarily by subcortical centers under the influence of a non-specific unitary function of the cortex, which is to some extent conditioned by the mass of functional tissue.—*R. Kuroda* (Keijo).

**5644.** Orton, J. H. Biology of shell-movements of the oyster. *Science*, 1935, **82**, 105-106.—It is suggested that when a partial rhythmic closure does not occur from any other cause, it may be a relief contraction effected by the motor component to reduce fatigue in the catch component of the muscle.—*R. Goldman* (Clark).

**5645.** Pennington, L. A. The auditory localizing behavior of the white rat in relation to cerebral function. *J. genet. Psychol.*, 1935, **46**, 264-283.—Using an elevated Y-maze and a suspended buzzer placed in irregular order near one of the two ends, rats were found to be capable of learning to localize the sound correctly, both positively (sound near food box) and negatively (sound near blind end). Controls were used to eliminate other sensory cues. 6 of the 16 rats were operated. The four with posterolateral injuries showed impairment in relearning the localizing habit, and in rough proportion to the amount of injury. The two with frontal injuries showed no impairment.—*J. F. Dashiell* (North Carolina).

**5646.** Ruch, F. L. Experimental studies of the factors influencing the difficulty of blind alleys in linear mazes. I. Experiments with the maze patterns: RLRLRLRRLRL and LRLRRRLLLRLR. *J. comp. Psychol.*, 1935, **20**, 21-34.—Analysis was made of the errors of 40 rats, divided into two comparable groups, while learning 12-unit linear maze patterns. One maze was a mirror image of the other. This was to control the possible influence of some innate turning preference. The number of entries into a blind was expressed as a proportion of all errors made in a given segment of trials, thus making possible an analysis in terms of the increase or decrease in relative difficulty of the blind during the course of training. The author was particularly interested in determining the influence of such factors as backward elimination of errors, generalized-turning habit, and anticipation. There is some evidence of backward elimination, especially when the performance on the first half of a maze is compared with that on the second half. A generalized-turning habit appears to be present. There is little evidence of an anticipatory factor. Most of the data concern the relative difficulty of given blind alleys. Extensive bibliography.—*N. L. Munn* (Pittsburgh).

**5647.** Ruch, F. L. Experimental studies of the factors influencing the difficulty of blind alleys in linear mazes. II. Generalized-turning habits. *J. comp. Psychol.*, 1935, **20**, 35-52.—10 rats were run for a food reward on a linear maze of the pattern RRLRRR and a similar group of 10 was trained on a mirror image of that pattern, LLRLLL. The results warranted combination of the data of both groups. "As learning advanced the relative difficulty of blind alley number 3 increased. This was attributed to the appearance of a generalized-turning

habit engendered by the learning of the maze." These results would be predicted, according to certain assumptions of the author, on the basis of the goal gradient. When 16 rats learned the dry maze LRRLLR and entries into alleys 3 and 5 were expressed as percentages of all of the entries into the homogeneous alley immediately preceding, blind 3, farther from the goal, showed more difficulty than blind 5, closer to the goal. The author points out that an anticipation factor should have favored errors in 5. When 39 rats were trained in an escape-from-water maze of the same pattern as the above, the results were in the same direction, but more marked. Analysis of the data of previous investigators shows that the generalized habit is of decreased potency when operating near the goal. The differential difficulty of blinds 3 and 5 in the LRRLLR sequence is greater in the water than in the dry maze. The generalized-turning habit is less apparent when motivation is stronger. These facts lead the author to present an hypothesis concerning the control manifested by internal and external factors in relation to generalized-turning habits. Extensive bibliography.—*N. L. Munn* (Pittsburgh).

5648. Schlosberg, H., Coronios, J. D., Trueblood, C. K., Smith, K. U., & Carmichael, L. Behavior sequences in the cat. (Film.) Providence, R. I.: Psychological Laboratory, Brown University, 1933. 2 reels, 800 ft., 16 mm. Rental and purchase prices on request.—A silent instructional film with suitable titles assembled from research films. The film includes the following sequences concerning the behavior of the cat: (1) characteristic sequences of fetal behavior; (2) the development from early postnatal life to the adult form of the ability of the animal to right itself when falling through air; (3) food preferences of kittens raised up to the time of the picture on a milk diet when presented for the first time with several forms of fish and meat; (4) the behavior of an adult cat in learning to get out of a typical puzzle box; (5) the string-pulling behavior of a cat (strings are so arranged that by pulling the appropriate one the cat secures food; no evidence of so-called insight-learning is shown in these sequences); (6) capacity of the cat to respond differentially to visual forms, including those involving concepts such as "triangularity" rather than absolute patterns of stimulus energy.—*L. Carmichael* (Brown).

5649. Smith, H. M. Synchronous flashing of fireflies. *Science*, 1935, **82**, 151-152.—An outline of the behavior of fireflies in Siam is given. Unlike that of the American species, the phenomenon observed in Siam is unrelated to mating. The males which exhibit the synchronous flashing are not in flight but are stationary on the leaves of a tree at the water's edge. The females remain in the jungle. Only during bright moonlight is the phenomenon absent; no other conditions interfere.—*R. Goldman* (Clark).

5650. Smith, K. U. Studies in discriminative behavior in the cat. (Film.) Providence, R. I.: Psychological Laboratory, Brown University, 1934. 1 reel, 800 ft., 16 mm. Rental and purchase prices

on request.—A silent film, adequately titled, showing the method employed in teaching a cat to use a lever discrimination apparatus and typical discriminative reactions brought about by its use. The responses set up by the use of 4, 3, or 2 such boxes in training animals to discriminate form are shown in a way to illustrate responses in so-called paired and unpaired stimulus situations. Visual acuity, brightness discrimination, and certain other visually controlled habits are also demonstrated. This film well illustrates the fact that a mammal such as the cat can give constant responses to patterns of stimulation which vary widely in their objectively measurable characteristics. Behavior of the sort shown here has been termed "generalization" and "concept formation" by certain psychologists.—*L. Carmichael* (Brown).

5651. Tellier, M. L'intelligence des singes inférieurs. II. Le relatif et l'absolu. (Intelligence of the lower monkeys. II. The relative and the absolute.) *Mém. Soc. Sci. Liège*, 1934, **20**, 1-64.—The author presents a series of experiments showing that his previous conclusions (see IX: 653) concerning the knowledge of the relative and the absolute are also verified in the perception of size, height, angles, intervals, degree of brightness, colors and distances. *Macacus sinicus* failed where *Macacus rhesus* succeeded in an experiment on the perception of rapidity of movement utilizing two small wheels and three different speeds.—*R. Nihard* (Liège).

5652. Tomilin, M. I., & Yerkes, R. M. Chimpanzee twins: behavioral relations and development. *J. genet. Psychol.*, 1935, **46**, 239-263.—An account is given of the first year of life of the only chimpanzee fraternal twins known. Both were born weak, especially the female, which did not learn to suckle until the fourth day. Differences appeared in later development, the female gaining more rapidly in the first half year, the male in the second. Temperamental differences were marked throughout, the male being active and aggressive, the female passive and timid. In their development they influenced each other somewhat. The mother was distinctly less solicitous and more matter-of-fact in handling the young than other chimpanzee mothers, but she was unusually friendly toward the keeper; these two traits were probably due to the mother's earlier experiences.—*J. F. Dashiell* (North Carolina).

5653. Verlaine, L. L'instinct et l'intelligence chez les hyménoptères. XXIV. L'operculation de l'alvéole par la larve des guêpes. (Instinct and intelligence in the hymenoptera. XXIV. Covering of the cell by wasp larvae.) *Bull. (Ann.) Soc. ent. Belg.*, 1934, **74**, 49-56.—The author does not believe that wasp larvae are guided by anything approximating a concept in those cases in which they succeed in covering the cells in which they pupate. The stimuli governing this work can be only visual and tactile, yet the larvae are able to modify or repair the construction of the cells provided the work is not too far advanced and the paper-secreting glands are not exhausted. Cell-covering, like all behavior, can be explained by

a modification of the hormones, thus creating new aptitudes and releasing reactions to stimuli hitherto ineffective.—*R. Nihard* (Liège).

5654. Verlaine, L. *L'instinct et l'intelligence chez les hyménoptères. XXV. La spécialisation et la division du travail chez les bourdons.* (Instinct and intelligence in the hymenoptera. XXV. Specialization and division of labor in the humble-bees.) *Bull. Soc. Sci. Liège*, 1934, No. 4, 81-86.—The author notes that the work of the queen humble-bee is less specialized than that of the queen wasp, which in its turn is less specialized than that of the queen bee. The humble-bee shows no division of labor among the workers. The bees have attained the highest degree of social organization of these three groups of hymenoptera, the humble-bees the lowest. These differences of specialization are not due exclusively to purely physiological factors. Psychic factors are also involved, particularly selective memory, which is the essential of an intellectual act.—*R. Nihard* (Liège).

5655. Wever, E. G. *A study of hearing in the sulfur-winged grasshopper (*Arphia sulphurea*).* *J. comp. Psychol.*, 1935, 20, 17-20.—An electrode was attached in or near the third thoracic ganglion, to which the tympanic nerve runs, and the impulses set up in this region were amplified until they could be heard in a telephone receiver. Measurements were made at frequencies ranging from 300 to 10,000~ by raising or lowering the intensity of stimulation by steps of 5 db. until the region of disappearance of the sound effects was located. The results indicate that "the tympanal organ of the grasshopper is very insensitive at low frequencies as compared with the ear of man. Near the lower limit it requires for threshold stimulation a sound pressure about 95 db. above, or more than 30,000 times, that required by the human ear. But with increasing frequency the auditory sensitivity of the grasshopper progressively increases, until at 10,000~ it closely approaches that of man. Beyond 10,000~ it is likely that the curve bends upward again, that is to say, the sensitivity becomes less, until the upper limit is reached around 20,000~."—*N. L. Munn* (Pittsburgh).

5656. Windle, W. F., Minear, W. L., Austin, M. F., & Orr, D. W. *The origin and development of somatic behavior in the albino rat.* *Physiol. Zool.*, 1935, 8, 156-185.—Rat embryos of 11-11.5 mm. first respond to stimulation in the region of the primitive shoulder. During the course of development excitability spreads rostrad and caudad as well as distad and ventrad from this region. Reflex response to flipping the foreleg occurs in some rats of 16 days old (12-13 mm.). The response was unrelated to trunk movements. The development of reflexes in later stages is described in detail. Strong stimuli over large areas were necessary at first, but later light stimulation sufficed. Criteria are given for distinguishing reflex movement from those by direct stimulation.—*O. W. Richards* (Yale).

[See also abstracts 5498, 5506, 5541, 5547, 5551, 5555, 5558, 5559, 5561, 5569, 5583, 5584.]

## EVOLUTION AND HEREDITY

5657. Bolton, J. S. *The evolution of mind. I.* *Lancet*, 1935, 228, 659-664.—The author presents a general description of the evolution of purposeful activity and the associated changes in types of body structure.—*D. J. Ingle* (Mayo Foundation).

5658. Bolton, J. S. *The evolution of mind. II.* *Lancet*, 1935, 228, 728-736.—The evolution of mammalian mind is discussed in relationship to the changes in brain structure. Photographs showing the comparative structure of the cerebrum among different animal species and among apes in humans are included.—*D. J. Ingle* (Mayo Foundation).

5659. Cook, R. *Effect of age at marriage on size of family.* *J. Hered.*, 1935, 26, 317-318.—Statistics gathered in Germany by Münzer and Löer have been summarized in *J. amer. Med. Ass.*, 1935, 104, 1919. Differential age at marriage accounts largely for differential birth rate but does not correlate sterility with voluntary or involuntary causes. Involuntary sterility, which increases with age, should be countered by measures for reducing age at marriage, particularly among the better-endowed portion of the population.—*G. C. Schwesinger* (American Museum Natural History).

5660. Fauville, A. *L'hérédité psychologique.* (Psychological heredity.) Brussels: 1934. Pp. 21.—A discussion of the inheritance of acquired characteristics, with a summary of results obtained from correlating various somatic and psychological traits found in parents and children, brothers and sisters, identical twins, and fraternal twins.—*A. B. Hunter* (Clark).

5661. Gordon, A. *The problems of heredity and eugenics.* *Eugen. News*, 1935, 20, 50-54.—Because of the multiplicity and diversity of factors influencing the transmission of normal heredity in man, selection for normal characteristics is still in its infancy. In abnormalities and pathological conditions striking dominant factors can be elicited and traced from generation to generation more easily. Developing this thesis, Gordon says that the most illustrative examples are found in familial disease. He presents observations from neuro-psychiatry under nine heads: myopathy, myelopathy, areflexia, spastic paraplegia, hereditary ataxia, multiple sclerosis, psychoses, mental deficiency, and psychoneuroses. Illustrative case descriptions include some comparisons of psychoses in twins. The author concludes that "transmission from parents to offspring of peculiarities of organization, physical as well as mental, is a biological law" and that race betterment depends upon this fundamental conception.—*M. V. Louden* (Pittsburgh).

5662. Hager, F. *Der gegenwärtige Stand der Frage der Sterilisierung Minderwertiger in Deutschland.* (The present status of the problem of sterilization of defectives in Germany.) Bochum-Langendreer: Pöppinghaus, 1934. Pp. viii + 34.—*R. R. Willoughby* (Clark).

**5663. Huntington, E.** *The Puritan as a racial stock.* *Eugen. News*, 1935, 20, 49-50.—The author states some preliminary results of a study of persons listed by name in the United States census of 1790 or set forth in *A Century of Population Growth*, and of the leaders listed in the *American Biographical Dictionary* and in *Who's Who*, using a technique to determine the percentage of Puritan inheritance borne today by people of any specific name. With respect to number of leaders, Puritan stock always excelled the other, the degree of superiority increasing with time. The greater the percentage of Puritan descent the larger the number of scientists and directors of corporations and the greater the representation in *Who's Who*. Occupations of Puritan descendants differed from those of others with a marked trend toward religion, science and engineering, literature and journalism.—*M. V. Louden* (Pittsburgh).

**5664. Leahy, A. M.** *Nature-nurture and intelligence.* *Genet. Psychol. Monogr.*, 1935, 17, 236-308.—"The present study approaches the problem by a comparison of two groups of children living in approximately identical environments." One group consists of adopted children and the other of "own" children. The records of 2449 children were searched in securing the experimental group. 194 adopted children between the ages 5 and 14 (white, non-Jewish, north-European, and placed in their adoptive homes at the age of 6 months or younger) were finally matched with 194 own children whose sex was the same, whose age was within 6 months, whose fathers' occupations fell in the same group on the Minnesota Occupational Scale, whose fathers' school attainments agreed within one school grade (mothers' also), whose parents were white, non-Jewish, and north-European, and whose residence had been in communities of 1000 or more. The children in both groups were given the Stanford-Binet and the Woodworth-Mathews Personal Data Sheet; the parents were given the Otis Self-Administering Test and the Stanford-Binet vocabulary. "Variation in IQ is accounted for by variation in home environment to the extent of not more than 4%; 96% of the variation is accounted for by other factors. . . . Measurable environment does not shift the IQ by more than 3 to 5 points above or below the value it would have had under normal environmental conditions. . . . The nature or hereditary component in intelligence causes greater variation than does environment. When nature and nurture are operative, shifts in IQ as great as 20 points are observed with shifts in the cultural level of the home and neighborhood. . . . Variation in personality traits measured in this study other than that of intelligence appears to be accounted for less by variation in heredity than by variation in environment." Earlier studies are reviewed and 8 references are cited.—*F. M. Teagarden* (Pittsburgh).

**5665. Savorgnan, F.** *Married fecundity and its bearing on the survival of the aristocracy.* *Amer. J. Sociol.*, 1935, 41, 205-211.—Analysis of the fecundity of marriages of the male members of families men-

tioned in the *Almanach of Gotha* for the period 1890-1909 and the children born to them down to 1926 shows the productivity and fertility in royal and mediatised families to be markedly superior to that of other groups. Taken as a whole it would seem that the fertility of the aristocracy exceeds that of the contemporary French, English, American, and Prussian middle classes. The fecundity of marriages between persons of like rank is much higher than that of others. Royal and mediatised marriages have an adequate productivity index of four children or more per marriage; all other aristocratic marriages fall below the minimum. A study of age distribution indicates that the only group in which regression is pronounced is that of the English dukes. Extinction is slower in the higher ranks of the aristocracy and is more rapid in the case of the nobility of recent date than of the older landed nobility living in the country. The gradual extinction of the aristocracy is of social importance only on the supposition that the aristocracy represents selection of the fittest, and if extinction of the legitimate male line coincided with the biological extinction of the family, which may continue through female and illegitimate descendants.—(Courtesy *Amer. J. Sociol.*)

**5666. Smith, S.** *Are there two species of twins?* *J. genet. Psychol.*, 1935, 46, 284-295.—If monozygotic twins exist, and if they occur only in pairs of like sex, then in a large number of unselected twins pair-differences would be less in those of like sex than in those of unlike. 69 pairs of like-sexed twins and 70 of unlike-sexed were measured for height and weight. To eliminate sex and age factors all measures were converted into S. D.'s of score differences from Baldwin's tables. These differences were much smaller for like-sexed than for unlike-sexed pairs—which is what would be expected if monozygotic twins exist among the former. A means of differentiating monozygotic and dizygotic pairs in terms of their S. D.'s is suggested.—*J. F. Dashiell* (North Carolina).

**5667. Stouffer, S. A.** *Trends in the fertility of Catholics and non-Catholics.* *Amer. J. Sociol.*, 1935, 41, 143-166.—Analysis of the confinement rates of 40,766 urban families in Wisconsin shows that between 1919 and 1933 the fertility of Catholics declined at a faster rate than the fertility of non-Catholics. When the data were divided into twenty-four groups by residence, age of wife, occupation of husband, and interval after marriage, it was found that births among Catholic families fell off in twenty-three of the twenty-four groups, while in twenty-one groups the Catholic fertility dropped faster than the non-Catholic fertility. The decline in Catholic fertility was as much in evidence among people with Slavic and Romance-language names in each Catholic occupational group as it was among people with Teutonic, Irish, and English names. That these findings may be generalized beyond Wisconsin is suggested, though not proved, by a partial correlation analysis which shows, with several factors held constant, that the northern and western cities of the

United States with a relatively large percentage of Catholics tended to decline in fertility at a more rapid rate between 1920 and 1930 than the northern and western cities with a relatively small percentage of Catholics.—(Courtesy *Amer. J. Sociol.*)

[See also abstracts 5473, 5652, 5734, 5776, 5826, 5866, 6047.]

### SPECIAL MENTAL CONDITIONS

5668. Alexander, F., & Healy, W. Ein Opfer der Verbrechermoral und eine nichtentdeckte Diebin. Zwei Analysen Krimineller. II. Der Fall Richard Vorland. (A victim of the criminal mores and an undetected thief. Two analyses of criminals. II. The Richard Vorland case.) *Imago, Lpz.*, 1935, 21, 158-206.—Unlike the undetected thief (see IX: 3703), this patient was in prison during the major part of his analysis. His stealing approached kleptomania in some respects. It was shown to represent getting a living without being obligated to anyone, and was closely connected with the patient's ambivalence toward an older brother, who was a successful thief. Identification with this brother vied with repressed hatred of him, coupled with a deep-lying sense of inferiority. Analysis was almost successful, considering its complication by external factors after the patient's release from prison. A different motive is believed to have brought about the joint theft for which he was convicted soon after the analysis, from which he gained much insight.—H. D. Spoerl (Northeastern).

5669. Bálint, M. Dr. Sandor Ferenczi as a psychoanalyst. *Indian J. Psychol.*, 1934, 9, No. 1-2, 19-27.—(Translated by B. Cooke.) One of the most important contributions made by Ferenczi to psychoanalysis was his development of techniques for teaching the patient to associate freely. He stressed the fact that the analyst must scrutinize himself carefully and make every effort to eliminate professional hypocrisy, if he is to obtain the best results with his patients. To the end of his life Ferenczi maintained an inquiring spirit.—H. Schlosberg (Brown).

5670. Barnes, F. H. The alcoholic problem. *Med. Rec., N. Y.*, 1935, 142, 120-122.—The author discusses the problem of the alcoholic habit as seen in the private mental hospital. The difficulties of therapy, the peculiarities of the alcoholic personality, and the physiological and psychological effects of alcohol are given briefly.—M. H. Erickson (Eloise Hospital).

5671. Bernfeld, S. Über die Einteilung der Triebe. (On the classification of the instincts.) *Imago, Lpz.*, 1935, 21, 125-142.—The conception of instincts in psychoanalysis has been a shifting one. The difficulty of defining their nature and function is augmented by the choice of unfruitful criteria. The original chemical and physiological criteria of instincts in psychoanalysis are unsuitable, or at least depend upon lacking developments in chemistry, etc. Another approach is by way of actual case studies; this yields psychoanalytical criteria. Instead of emphasizing the source of instincts, this method is physiognomical,

dealing with the features of actual situations. It is demonstrated to work well for the modern instinct-schema of Eros and Thanatos. A future development would be the determination of topological criteria, thus connecting psychoanalysis directly with *Geisteswissenschaft*. It is questionable whether psychoanalysts will take this step.—H. D. Spoerl (Northeastern).

5672. Berrien, F. K. A study of objective dream activity in abnormal children. *J. abnorm. soc. Psychol.*, 1935, 30, 84-91.—Overt motor expressions of dreaming fluctuate in frequency from day to day in the type of children studied. While the hours of greatest and least frequency vary greatly, in general there is a gradual decrease in dreaming as morning approaches. Certain unusual events, such as movies, occurring in the evening and accompanied by some loss of sleep, act as an inhibiting force on the frequency of dreams. Attendance in any of the usual school, music, or playground activities has little apparent influence on dream activity. Aggressiveness in dreams tends to occur more frequently in those children judged aggressive than in unaggressive children.—C. H. Johnson (Boston Psychopathic Hospital).

5673. Bonaparte, M. Passivity, masochism and femininity. *Int. J. Psycho-Anal.*, 1935, 16, 325-333.—The author elaborates these topics by a brief discussion of each of the following subjects: (1) the pain inherent in the female reproductive functions; (2) erotic pleasure in women; (3) the infantile sadistic conception of coitus; (4) the necessary fundamental distinction between masochism and passivity; (5) the female cloaca and the male phallus in women.—M. H. Erickson (Eloise Hospital).

5674. Bonaparte, M. Introduction à la théorie des instincts. III. (Introduction to the theory of instincts. III.) *Rev. franç. Psychanal.*, 1934, 7, 611-654.—J. Mc V. Hunt (Worcester State Hospital).

5675. Cavalcanti, P. Contribuição ao estudo do estado mental dos médiums. (Contribution to the study of the mental state of mediums.) Recife: 1934. Pp. 106.—An inquiry into the physiological, mental, cultural, and socio-economic status of clairvoyants. IQ was determined by the Binet-Simon-Terman scale, the psychological profile by a modified Rossolimo method. Ten of the eleven women and three men who were tested were illiterate. All except one (whose IQ was 83) were mentally "below the frontier of normality."—R. M. Bellows (Ohio State).

5676. Conrad, A. Analysis of a case of chronic invalidism with hysterical mechanism complicating organic disease. *Psychoanal. Rev.*, 1935, 22, 288-296.—This case is one of "chronic invalidism and essential hypertension" in a negro woman. There were evidences of arteriosclerosis and heart disease. She had gastric ulcer symptoms on at least two occasions. Each breakdown was found to have been preceded by a breaking up of a love affair. She was given some psychoanalysis, which was followed by relief of certain symptoms. With analysis of moral dependence on the mother came relief from anxiety (previously shown in cases of Graves' and pseudo-

Graves' constitution). The cardiac symptoms were found to be linked up with fear of death associated with violation of the fifth commandment, resulting from defiance of the absolute authority of the mother. In spite of her appearance being more white than negro, and in spite of a normal school education, her dream symbolism proved to be primitive and her emotional patterns simple. Her compulsion to live according to folk codes was not entirely brought under control by analysis.—*L. S. Selling* (Wayne).

5677. **De Saussure, R.** *Les sentiments d'infériorité.* (Feelings of inferiority.) *Rev. franç. Psychanal.*, 1934, 7, 655-664.—*J. Mc V. Hunt* (Worcester State Hospital).

5678. **Fenichel, O.** *Beitrag zur Psychologie der Eifersucht.* (Contribution to the psychology of jealousy.) *Imago, Lpz.*, 1935, 21, 143-157.—That jealousy is not a simple unpleasant reaction (hate plus envy) to denial of gratification is shown by two characteristics. It is not greatest where gratification before denial was greatest, and it is not repressed into the unconscious as would be expected. Consequently jealousy is to be understood as a product of the oral rather than the genital phase. This conclusion is borne out in the case of a jealous female patient. Her impotent husband aroused her jealousy through the mistaken belief that he was finding satisfaction elsewhere. It was this suspicion and not her own deprivation that aroused jealousy. Analysis showed the state to be a mechanism of oral introjection.—*H. D. Spoerl* (Northeastern).

5679. **Ferenczi, S.** *Relaxation and education.* *Indian J. Psychol.*, 1934, 9, No. 1-2, 29-33.—(Translated by B. Cooke from a posthumous ms.) When the analysis has led back to the first stage of the process of repression, "the only bridge between the real world and the patient . . . is the analyst who urges the patient to intellectual effort in the middle of the emotion instead of his simple behavioristic and emotional repetition, and encourages him untiringly with questions."—*H. Schlosberg* (Brown).

5680. **Ferenczi, S.** *On the revision of the interpretation of dreams.* *Indian J. Psychol.*, 1934, 9, No. 1-2, 34-38.—(Translated by B. Cooke from a posthumous ms.) "The state of unconsciousness and sleep respectively favors not only the predominance of the pleasure principle (wish-fulfilling function of the dream) but also the return of the unadjusted, traumatic, sensorial impressions which strive for adjustment (traumatolytic function of the dream)." This statement is elaborated, partly through examples.—*H. Schlosberg* (Brown).

5681. **Freud, S.** *Deux mensonges d'enfants.* (Two lies of children.) *Rev. franç. Psychanal.*, 1935, 7, 606-610.—*J. Mc V. Hunt* (Worcester State Hospital).

5682. **Freud, S.** *Malaise dans la civilisation.* (Unhappiness in civilization.) *Rev. franç. Psychanal.*, 1935, 7, 692-769.—*J. Mc V. Hunt* (Worcester State Hospital).

5683. **Heimann, J.** *Die Heilung der Elisabeth Browning in ihren Sonetten.* (The cure of Elizabeth

Browning by her sonnets.) *Imago, Lpz.*, 1935, 21, 227-254.—Apart from the undetermined nature of her organic ailment, Elizabeth Browning's neurosis is evident and clear-cut. Viewed psychoanalytically, it involved defense against her father and her erotic tendency in that direction, identification with her (dead) invalid mother, and the desire to join her dead brother. This situation is revealed in available biographical material. Robert Browning's role was at first that of a vehicle for transference, and only latterly that of accepted husband. The sonnets clearly portray the resolution of Elizabeth's conflict in a gradual turning from death to normal love.—*H. D. Spoerl* (Northeastern).

5684. **Institute for Psychoanalysis.** *Review for the year, 1932-1933.* Chicago: Institute for Psychoanalysis, 1934. Pp. 47.—(Not seen).

5685. **Jelinek, J., & Papnircnik, A.** *Případ davové suggesce in foro.* (A case of mass suggestion in a public meeting.) *Rev. Neurol. Psychiat., Praha*, 1934, 31, No. 5, 124-138.—*R. R. Willoughby* (Clark).

5686. **Kallen, H. M.** *Psychoanalysis.* *Encycl. soc. Sci.*, 1934, 12, 580-588.—An outline of the salient points in the theory and mechanisms of Freud, Jung and Adler.—*L. A. Riggs* (Clark).

5687. **Laforgue, R.** *Exceptions à la règle fondamentale.* (Exceptions to the fundamental rule.) *Rev. franç. Psychanal.*, 1934, 7, 684-690.—*J. Mc V. Hunt* (Worcester State Hospital).

5688. **Levin, M.** "Crowding" of inhibition and of excitation. *J. Neurol. Psychopath.*, 1934, 14, 345-348.—Further applications of Pavlov's theory of sleep to narcolepsy and related phenomena.—*D. G. Marquis* (Oxford, England).

5689. **Mosonyi, D.** *Die irrationalen Grundlagen der Musik.* (The irrational basis of music.) *Imago, Lpz.*, 1935, 21, 207-226.—The irrational basis of music is manifest from the point of view of psychoanalysis in consideration of its connection with the pleasure principle as opposed to the reality principle. There is much evidence that music, in its original form, arises from unpleasure. It develops as a means of irrational expression of powerful instinct inhibited in other directions; indeed, primitive society often tabus some aspects of music. In rhythm, as of the dance, the irrational basis is seen in irregularity. Melody is connected with muscular power in producing sound, harmony with "mass-ecstasy." Like play and dreaming, music shows a close correspondence with unconscious processes. The direct application of this theory of music as a narcissistic fulfilment is mainly to primitive and non-instrumental music. "To demonstrate the sexual instinct in one of Beethoven's symphonies is obviously a vain undertaking."—*H. D. Spoerl* (Northeastern).

5690. **Newman, H. W.** *Alcohol injected intravenously. Some psychological and psychopathological effects in man.* *Amer. J. Psychiat.*, 1935, 91, 1343-1352.—Intravenous administration keeps the subject from realizing that he is receiving alcohol, thus eliminating the subject's interpretation of the action of alcohol in respect to behavior. The factor of

absorption from the gastro-intestinal tract is eliminated. 50 subjects (psychoneurotics, schizophrenics, and patients with organic diseases of the central nervous system) were used. The schizophrenic group retired farther from reality; garrulity, emotional outbursts, and multiplication of symptoms were shown by the psychoneurotics; the third group were more free in conversation, and showed an intensification of existing mood and a tendency to drowsiness.—R. Goldman (Clark).

5691. Roy, B. Dream-dissociation. *Indian J. Psychol.*, 1934, 9, No. 1-2, 89-94.—After examining a number of theories of dreams, it is concluded that both day and night dreams occur during a partial dissociation of the dream and waking personalities.—H. Schlosberg (Brown).

5692. Sapir, E. Symbolism. *Encycl. soc. Sci.*, 1934, 14, 492-495.—L. A. Riggs (Clark).

5693. Schilder, P. *The image and appearance of the human body*. London: Kegan Paul, 1935. Pp. 353. 10/6; \$2.50.—A study of the body-image—"the picture of our own body which we form in our mind"—in its physiological, libidinous, and sociological aspects. In the section on the physiological basis of the image such subjects as postural and tactile impressions, localization, imperceptions of various kinds, synesthesia, apraxia, agnosia, the phantom, muscle-tone, and pain in their relation to the postural model of the body are discussed. In the section on the libidinous structure narcissism, erogenic zones, neurasthenia, depersonalization, hypochondria, hysteria, and conversion are some of the fields which are considered in their relation to the body-image. The sociology of the body-image considers curiosity, the expression of emotions, imitation, identification, beauty, and other social aspects of the body-image. An appendix giving case histories of organic brain lesions and another giving an elementary discussion of the anatomy and physiology of the nervous system are included. Bibliography and index.—D. Shakow (Worcester State Hospital).

5694. Schilder, P. Psychoanalysis and philosophy. *Psychoanal. Rev.*, 1935, 22, 274-287.—This is a summary of some of the Freudian beliefs with special reference to the author's interpretations of them. He points out that Freudian psychology arose during a materialistic period of science. It is the final point in associational psychology, and still uses the terminology of that psychology, even though meanings have changed. The technique of psychoanalysis is called "free association," but has come to mean a freeing of basic ideation. Knowing this, Jung's ideas of multiple complexes cannot be true; in fact, even the Freudian concept of the complex has changed, and two basic complexes stand out, the Oedipus and castration complexes. The author does not agree with the Freudian idea of the development of the concepts of body image or with the Freudian death instinct. He does not believe that the death instinct can be compared to physical concepts, although he compares Freudian causality with certain physical ideas regarding causality. The fact-finding

nature of psychoanalysis and the lack of relationship between psychoanalysis and logic are pointed out. In spite of Freud, psychoanalysis does have a connotation concerning ethics and *Weltanschauung*.—L. S. Selling (Wayne).

5695. Sterba, E. Analyse d'un cas de phobie des chiens. (Analysis of a phobia for dogs.) *Rev. franç. Psychanal.*, 1935, 7, 665-683.—J. Mc V. Hunt (Worcester State Hospital).

5696. Szirmay-Pulszky, H. Néhány statisztikai adat a zseni-kérdezhez. (Some statistical data concerning the problem of genius.) *Mag. psychol. Szle*, 1934, 7, No. 1/2, 100-107.—Ranschburg found that the average life span of 226 famous men was considerably above the average for the general population. Lange-Eichbaum concluded from her study of 300 notables that 12% of the group were psychotic as against 0.5% of the population at large. The present author analyzes Ranschburg's cases further and finds 9% psychotics and 30% psychotics and psychopaths combined. She then lists 51 healthy men of genius (14 painters, 8 poets, 5 composers).—H. Beaumont (Kentucky).

5697. Towne, J. E. Carlyle and Oedipus. *Psychoanal. Rev.*, 1935, 22, 297-305.—Carlyle himself knew he had a weak nervous system. He had a strong mother attachment. Carlyle's historian Froude brings out these facts and also points out the unsuitable marriage which Carlyle made. The author considers Froude prejudiced against the wife, and feels that the unsuitability of the marriage has hitherto been seen in the wrong light. The present article is largely a list of events in Carlyle's life with special emphasis upon his Oedipus complex, which in the light of analysis explains the mental difficulty and also Carlyle's makeup.—L. S. Selling (Wayne).

5698. Vaughan, W. F. An experimental class demonstration of suggestibility. *J. abnorm. soc. Psychol.*, 1935, 30, 92-94.—Visual estimation of linear magnitudes was tested by holding before a class sticks of various lengths. Members of the class were astonished at their susceptibility to the group influence on a retest after knowing the results of the group in judging on the first test.—C. H. Johnson (Boston Psychopathic Hospital).

5699. Voigt, G. Ueber psychische Wirkungen von koffeinhaltigem und koffeinfreiem Kaffee auf den Menschen. (The psychic effects of caffeine-containing and caffeine-free coffee in man.) *Dtsch. med. Wschr.*, 1934, 60, No. 41.—R. R. Willoughby (Clark).

5700. Wali-ur-Rehman, M. Hart's attack on Freud. *Indian J. Psychol.*, 1934, 9, No. 1-2, 103-123.—Hart objects to the "facts" of psychoanalysis, since they are not obtained by simple observation. But the author thinks that the psychoanalytic method is as simple as that of a chemist. The subjectivity of psychoanalytic facts to which Hart has referred is a limitation of all psychology, and has its counterpart in the other sciences. The facts are no more distorted than are any other facts which are based on perception. Other objections of Hart's, as the differing interpretations of similar material by different groups of

psychoanalysts, are met in a similar fashion. He concludes that there are no adequate grounds for rejecting Freud's concepts.—*H. Schlosberg* (Brown). [See also abstracts 5425, 5455, 5478, 5551, 5552, 5563, 5591, 5717, 5790, 5830, 6019, 6039, 6051, 6053.]

## NERVOUS AND MENTAL DISORDERS

5701. Allen, C. The diagnosis and treatment of the early psychotic and prepsychotic. *Brit. J. med. Psychol.*, 1935, 15, 140-152.—Exploratory treatment (i.e., "any treatment which attempts to examine the unconscious and to reveal it to the patient"), if it is used on psychotic patients, is no more dangerous than any other mode of therapy, and may occasionally be of benefit.—*E. R. Hilgard* (Stanford).

5702. Árnason, Á. Apoplexie und ihre Vererbung. (Apoplexy and its inheritance.) *Acta psychiat., Kbh.*, 1935, 7. Pp. 170.—*H. A. Kohn* (Mooseheart Laboratory for Child Research).

5703. Baonville, H., Ley, J., & Titeca, J. Les idées délirantes de grossesse chez l'homme. A propos de deux cas. (Delusions of pregnancy in male patients. Two cases.) *J. belge Neurol. Psychiat.*, 1935, 35, 322-327.—The authors give the history of two male patients in whom the delusion of pregnancy was a marked characteristic. One case was a man of 73 with serious organic deterioration due to cerebral arteriosclerosis, the other a man of 44, suffering from hypochondriasis with periods of depression without dementia. The authors believe that there exists in such cases a combination of organic disorders, disturbances in the cerebral function and involvements of the psychological superstructure.—*H. Sys* (Cornell).

5704. Bena, E. Odolnost pojmovych funkci intelektu oproti casnemu snizovani nekterych funkci pameti u pripadu incipientni schizofrenie. (The ability for abstract reasoning in spite of early deterioration of some memory functions of intelligence in a case of incipient schizophrenia.) *Rev. Neurol. Psychiat., Praha*, 1935, 32, 97-104.—The fact that, in incipient schizophrenia, abstract reasoning remains intact, while the ability to learn new material is markedly affected, is illustrated in a case of a 17-year-old high school boy. A hypothesis is then presented in terms of the physiology of the nervous system, along the lines of reasoning in associational psychology. The abstract and comprehensive functions of intelligence are represented in the cortex by some special points which are closely interrelated and significantly more frequently stimulated than points which correspond to the images of concrete objects. The change which occurs in the cortex in incipient schizophrenia is shown on a diagram.—*Z. Piotrowski* (Columbia).

5705. Bender, L. Gestalt function in visual motor patterns in organic disease of the brain, including dementia paralytica, alcoholic psychoses, traumatic psychoses and acute confusional states. *Arch. Neurol. Psychiat., Chicago*, 1935, 33, 300-329.—An extension of a series of studies of the genesis and

nature of the Gestalt function by means of the analysis of copied figures.—*D. G. Marquis* (Oxford, England).

5706. Benedek, L. Az insulin-shock hatása a szemléletre. (Effects of insulin on perception.) *Mag. psychol. Szle*, 1934, No. 1/2, 5-72.—Small doses of insulin have been given to schizophrenes in the psychiatric-neurological clinic at Debrecen for the past six years. This is a report of the effects on 14 subjects of rapidly increased daily doses. Before the onset of coma patients showed excessive perspiration, fear, unrest, and fixation difficulties. During the coma strabismus and nystagmus often occurred; temperature was slightly above normal; some showed epileptic symptoms; corneal reflex and pupillary reflex were usually absent; muscle tonus was sometimes low, in others rigid. Painful stimulation of the skin during deep coma was usually correctly localized by the patients, who covered the stimulated area with the hand. The majority of patients recognized and accurately formulated the perceptual changes following their recovery from coma (lasting from a few seconds to several minutes). They reported lowered ability to perceive spatial and temporal relations, forms and movements; a chaotic mass of impressions instead of the usual ordered environment; diffusion of the stimulating object, the sensation and their own subjective being; in short, perceptual experiences which pointed to a more primitive type of functioning, such as is found in isolated cases of vascular or mechanical lesions.—*H. Beaumont* (Kentucky).

5707. Beritoff, I. & Dzidzishvili, N. M. [On studies of microcephalus behavior.] *Trud. biol. Sekt., Akad. Nauk SSSR, zakavkaz. Filial*, 1934, 1, 161-165.—The authors summarize an investigation of the behavior of a female microcephalus, undertaken to discover the labor capacity of this type of ament.—*R. Smith* (Clark).

5708. Bermann, G. La psicología clínica en la enseñanza médica. (Clinical psychology in medical teaching.) *Arch. argent. Psicol. norm. pat.*, 1935, 2, 3-5.—Medical curricula have tended up to the present time to stress physical and chemical methods—they have neglected the socio-psychological aspects of the patient. The candidate for medical practice should be trained in vocational guidance and selection and clinical psychiatry, and should have insight into the general social and economic problems of the individual.—*R. M. Bellows* (Ohio State).

5709. Berner, O. Eine geschichtliche Übersicht über den Entwicklungsgang im Studium der traumatischen Gehirnläsionen mit besondere Hinblick auf den Begriff "commotio cerebri." (An historical survey of the course of development of studies of traumatic brain lesions, with special attention to the concept of concussion of the brain.) *Skr. norske Vidensk. Akad.*, 1935, No. 5. Pp. 57.—*R. R. Wiloughby* (Clark).

5710. Bridge, E. M. Mental state of the epileptic patient. *Arch. Neurol. Psychiat., Chicago*, 1934, 32, 723-736.—The so-called epileptic personality is not an entity which bears any specific causal relationship

to the disease, but represents, in large part, the response of such patients to the problems and situations which the very nature of their disease creates.—*D. G. Marquis* (Oxford, England).

5711. Cameron, D. E. Heat production and heat control in the schizophrenic reaction. *Arch. Neurol. Psychiat.*, Chicago, 1934, 32, 704-711.—Measurements of internal temperature in 50 schizophrenic and 50 control subjects at room temperature and after exposure to extreme heat and cold demonstrated that (1) heat production in the schizophrenic is lower than in the non-schizophrenic group, and (2) heat control in the schizophrenic is more active than in the non-schizophrenic group. The latter finding is apparently in the nature of a compensation for the decreased output of heat.—*D. G. Marquis* (Oxford, England).

5712. Campbell, C. M. *Destiny and disease in mental disorders*. New York: Norton, 1935. Pp. 207. \$2.00.—This book contains the author's three Thomas W. Salmon Memorial Lectures. The first lecture, entitled "Trends in Psychiatry," deals with the general aspects of the growth of psychiatry and the various significant contributions serving to direct its course. The second lecture, "The Stuff of Life and the Schizophrenic Reaction," discusses the various attitudes taken toward life and their consequent reactions, illustrating with numerous selected brief histories of schizophrenic patients. The third lecture, "Our Kinship with the Schizophrenic," discusses "general principles and some particular symptoms to illustrate how the general trends of psychiatry outlined in the first lecture converge upon the particular problems of the second lecture." Index.—*M. H. Erickson* (Eloise Hospital).

5713. Cason, H. A case of anterograde amnesia. *J. abnorm. soc. Psychol.*, 1935, 30, 107-110.—The writer was the subject of localized amnesia which resulted from a fall on the ice while skating. A good witness observed his behavior closely for some time after he fell and throughout most of the period of time for which he later had a complete loss of conscious memory.—*C. H. Johnson* (Boston Psychopathic Hospital).

5714. Dearborn, G. V. N. Notes on habituation in mental derangement. *J. abnorm. soc. Psychol.*, 1935, 30, 22-42.—Principles of habituation which apply to the abnormal as well as the normal are: (1) the degree and the persistence of the attentive interest of the individual in the to-be-habituated act; (2) the frequency of the repetitions of the act; (3) the final total number of repetitions, the other factors being unchanged; and (4) the plasticity of the neuroplasm. A fifth habituation principle of special application to psychiatry is the persisting innate or acquired relative vigor or weakness of personal inhibition or control of the realized habituation. The therapeutics of over-habituation comprises the process of habit-bending or habit-replacement. The first step is to make the patient realize his bad habits of mind and body, then to replace the psychoneurotic or psychotic habits with other habits closer to normality and based on social instead of anti-social interests and endeavors. Prin-

ciples of habit-bending as applied to psychoneurotics are: (1) self-interest protection is to be made the guiding rule; (2) replace a bad habit by some harmless and if possible pleasant substitute; (3) bend only one habit at a time; (4) continual and explicit encouragement as to progress; (5) develop chances of success by outdoor exercise, sleep and plain food.—*C. H. Johnson* (Boston Psychopathic Hospital).

5715. De Busscher, J. *Pupillotonie et aréflexie tendineuse*. (Pupillotonia and tendon areflexia.) *J. belge Neurol. Psychiat.*, 1935, 35, 331-338.—The author gives the case history of a patient who presented tonic pupils and patellar areflexia which led to the diagnosis of tabes. This diagnosis, however, was not substantiated by a more thorough neurological examination or by serological tests. The author refers to the discussion of W. I. Adie (1932) on tonic pupils and absent tendon reflexes as a benign disorder *sui generis* and emphasizes that the diagnosis and treatment of tabes dorsalis should be based on a very careful examination of the nervous system in cases where the serology gives normal findings.—*H. Sys* (Cornell).

5716. De Sanctis, S. *Vecchie questioni e nuovi programmi nel campo della neuropsichiatria infantile*. (Old questions and new programs in the field of the neuro-psychiatry of childhood.) *Z. Kinderpsychiat.*, 1934, 1, 133-143.—The author deplores the fact that the difference between degree and type of mental inferiority is not given sufficient importance. Neuro-psychiatrists do not interest themselves sufficiently in the measurement of intellectual defect. Besides a study of the intensity and extensy of symptoms, their variability should also be taken into account. Symptoms should not be taken individually, but in relation to the whole picture. It is important to keep in mind the concept of functional age in addition to the other "ages" which have been adopted in child psychology. Among other topics which are discussed are the use of periodic photography, mental tests, and observation stations in clinics.—*D. Shakow* (Worcester State Hospital).

5717. Ewen, J. H. Sleep and its relationship to schizophrenia. *J. Neurol. Psychopath.*, 1934, 14, 247-251.—The similarity of schizophrenia to the dream state led the writer to postulate that the mechanism underlying sleep (parasympathetic system—Hess) must also be responsible for the schizophrenic reaction. Physiological observations of ten patients showed signs of parasympathetic over-reaction.—*D. G. Marquis* (Oxford, England).

5718. Fetzer, M. E. Clinical study in epilepsy. *J. comp. Psychol.*, 1930, 20, 13-16.—No difference in autonomic nervous reactions between normal and epileptic individuals and between different types and phases of epilepsy was observed. The method of analysis was in terms of pulse reactions to injections of atropine.—*N. L. Munn* (Pittsburgh).

5719. Focquet, P. *Délires de grossesse chez l'homme*. (Delusions of pregnancy in male patients.) *J. belge Neurol. Psychiat.*, 1935, 35, 328-330.—The author presents two case histories. One was a male

patient, aged 33, unmarried, who showed a mental disturbance with phases of depression during which he believed himself to be pregnant. This idea persisted for several days on two occasions, after which periods the patient recognized the absurdity of his notion and improved generally. The second case was that of a male patient of 45 who in the course of a general paresis, shortly after a temporary improvement on malaria treatment, believed he had children and a fish in his abdomen. This was followed by progressive dementia.—*H. Syz* (Cornell).

5720. Freeman, W. Symptomatic epilepsy in one of identical twins: a study of the epileptic character. *J. Neurol. Psychopath.*, 1935, 15, 210-218.—Careful character study of identical twins, one of whom had suffered a cerebral injury in early life with subsequent epilepsy, permitted the differentiation of primary and secondary manifestations of the epileptic character. Egocentricity and supersensitiveness are the outstanding features of both twins, while other phenomena such as mental and physical inertia, performance by rote, explosive reactivity, suspension of affect, unproductivity, and inelasticity of intellectual processes appear to be secondary to the brain damage of the epilepsy.—*D. G. Marquis* (Oxford, England).

5721. Gordon, A. Combined psychoses: their pathogenesis in relation to personality. *Med. Rec.*, N. Y., 1935, 142, 225-229.—Two case reports are given to demonstrate the modification of psychotic manifestations occurring in a psychosis in such fashion that different psychoses seemed to be superimposed. The first case presented a mixture of schizoid and cycloid manifestations, and the second case was that of a patient suffering from paresis but showing schizophrenic symptomatology of the catatonic type. The author discusses in some detail the history of the patient and the peculiar manifestations of the psychotic illness, and expresses the belief that mixed heredity may account for some atypical psychoses, that organic disease may play a role in uncovering concealed or latent personality disorders, and that the concept of combined or mixed psychosis is at best questionable.—*M. H. Erickson* (Eloise Hospital).

5722. Groves, E. R. Understanding yourself. The mental hygiene of personality. New York: Greenberg, 1935. Pp. 278. \$2.50.—"This book has a practical purpose. It seeks to help the reader to understand himself and his problems, that he may increase his successes and his satisfactions. The discussion centers about the conditions that shape personality, but the attempt of the book is not to rehearse the findings and theories of science but to provide the means by which the reader can come to a better understanding of himself."—*S. Rosenzweig* (Worcester State Hospital).

5723. Hackfield, A. W. Are physiologic disturbances related to the acute psychotic process in the mentally ill? *Arch. Neurol. Psychiat.*, Chicago, 1932, 28, 883-890.—Gastric analyses and blood sugar tolerance tests made on 54 cases of affective psychosis of acute onset showed marked physiologic disturbances. With improvement of the psychotic process

these functional derangements again approached a normal state.—*D. G. Marquis* (Oxford, England).

5724. Harms, E. Paranoisierende Sozialität. (Social factors promoting paranoid attitudes.) *Psychiat.-neurol. Wschr.*, 1935, 37, No. 21. Pp. 5.—Granting the constitutional basis of the paranoid disorders, the author points out that certain factors in the life of present-day society cause a disorientation of the individual and consequently a development of paranoid attitudes. Among such factors are included the "secrecy" of the bureaucratic organization, the "social lie" based on the ill-will of a group toward a stranger, the extensive use of systems of symbols which remain meaningless for the uninitiated, and finally the elements of the abstract and of the relative in the picture of the world drawn by modern science. The author stresses the possibility of prevention and therapy of paranoid attitudes through a proper rearrangement of the narrower and wider social environment.—*E. Hanfmann* (Worcester State Hospital).

5725. Hegge, T. G. Results of remedial reading at the middle moron level: a case study. *J. juv. Res.*, 1935, 19, 128-134.—A report is given of three years of intensive work with a feeble-minded boy. Some discussion is provided of the problem of determining the limits of training.—*H. L. Koch* (Chicago).

5726. Hurst, A. F. Sterility and psychoneuroses following lumbar sympathectomy. *Lancet*, 1935, 228, 805-806.—Lumbar sympathectomy in two males resulted in loss of capacity for emission during the sexual act. Other sex functions were normal. In each patient a psychoneurosis developed upon the discovery of the loss. The neurosis was regarded as psychogenic in origin in each case.—*D. J. Ingle* (Mayo Foundation).

5727. Katzenelbogen, S., & Luton, F. H. Hyperthyroidism and psychobiological reactions. *Amer. J. Psychiat.*, 1935, 91, 969-981.—In some psychotic patients the hyperthyroid function appeared to play a role as a causative, precipitating or aggravating factor; in other patients, hyperthyroidism was unrelated to the psychosis. "Thyroidectomy is regarded as a treatment measure which may or may not have an influence on the general personality background; it, therefore, should always be supplemented by treatment of the patient's total personality and the situation in which hyperthyroidism has developed."—*R. Goldman* (Clark).

5728. Klimo, Z. Porucha vedomia u ludi, ktori ozly po uvolneni zo strangulacie po pokuse samovrazdy obesemim. (Disturbances of consciousness in people who were revived after a suicidal attempt to hang themselves.) *Rev. Neurol. Psychiat.*, Praha, 1935, 32, 1-11.—Detailed description of four cases, one woman 40 years old and three men 24 to 29 years of age. In all cases motor disturbances, lack of orientation in space and time, and confabulation were observed; in one case these disturbances lasted 39 days. In no case were the neurological symptoms described by H. Strauss and their temporal succession noted. The conclusion is made that a gradual

recovery of the various intellectual functions, after strangulation, is a very rare phenomenon.—Z. Piotrowski (Columbia).

5729. Kopp, P. Psychiatrisches bei Thomas von Aquin. *Beiträge zur Psychiatrie der Scholastik II.* (Psychiatry in Thomas Aquinas. Contributions to scholastic psychiatry II.) *Z. ges. Neurol. Psychiat.*, 1935, **152**, 178-196.—Following a somewhat detailed outline of Thomas' system of normal psychology, the writer presents Thomas' views concerning mental disorders. These views are not entirely original, for they reflect the opinions of his predecessors and contemporaries, especially Albertus Magnus. Thomas lays great stress upon the significance of all bodily processes for mental activity.—C. W. Fox (Rochester).

5730. Langfeldt, G. Rettspsykiatriske erfaringer omkring sikringsparagrafen, straffelovens §39. (Legal psychiatric experiences in connection with the safeguarding paragraph, the penal law §39.) *Tidsskr. norske Laegeforen.*, 1935, **55**, 485-493; 528-543.—The writer is concerned with the criteria to be used in declaring the desirability of safeguarding measures to be taken according to the Norwegian penal code, when the criminal has "deficiently developed or permanently impaired mental capacities," and there is a danger of repeated offense on this account. The author points out that the IQ alone is not sufficient basis for judging the case and that temperamental and moral aspects as well must be considered. The most dangerous factor is "lack of inhibition with impulsive need for satisfying the drives." This condition is not always concomitant with a low IQ. From about 100 cases examined by the writer, 34 were recommended for certain safeguarding measures which might now be taken, according to §39 of the Norwegian penal code.—V. Coucheron-Jarl (Mooseheart Laboratory for Child Research).

5731. Lima, A., & Guerner, F. Paranoico homicida. (Homicide by a paranoiac.) *Rev. Neurol. Psychiat. S. Paulo*, 1935, **1**, 232-237.—The patient is of paranoid constitution, manifesting persecutory delusions. He shot one of his imaginary foes. The crime was considered symptomatic.—R. M. Bellows (Ohio State).

5732. Linton, J. M., Hamelink, M. H., & Hoskins, R. G. Cardiovascular system in schizophrenia studied by the Schneider method. *Arch. Neurol. Psychiat.*, Chicago, 1934, **32**, 712-722.—The Schneider test, purporting to measure cardiovascular "fitness," yielded a score for 99 schizophrenic patients significantly lower than for 25 control subjects.—D. G. Marquis (Oxford, England).

5733. Longwell, S. G. Influence of muscle training on birth-injured mentally deficient children. *J. genet. Psychol.*, 1935, **46**, 349-370.—Ten patients receiving physical therapy were compared with ten not receiving it with respect to their abilities on a list of performances useful for social independence (many subtests of locomotion, dressing, bathing, eating, communication, control of excretory functions). During the period the treated group gained 25% of the abilities lacked at the beginning, whereas the non-treated gained 15%. Such factors as mental age,

the degree of impairment, its type, motivation, and incidental practice, must be considered, but it is suggested that experience gained by such training of deficient children should be useful in training the normal.—J. F. Dashiell (North Carolina).

5734. Lotz, E. R. Emotional status of the parents of problem and psychopathic children. *Sch. & Soc.*, 1935, **42**, 239-240.—The author studied 112 intellectually and physically normal children who showed serious behavior and personality difficulties. Of the 48 individuals who were considered psychopathic, all but one, the author thinks, had a defective heredity. The parents of 62 out of 64 children labelled as unstable were reported as grossly maladjusted.—H. L. Koch (Chicago).

5735. Mayer-Gross, W. On depersonalization. *Brit. J. med. Psychol.*, 1935, **15**, 103-126.—Under depersonalization are included both the changes of the self and the changes in the environment ("de-realization"), symptoms of the individual who no longer acknowledges himself as a personality and for whom the outer world has lost its character of reality. Various psychological theories of depersonalization have been based upon partial facts (e.g., changes in clearness and range of consciousness, self-observation, lack of feelings or emotions, disturbances of memory, changes in the perception of space or time, subjective experiences of bodily changes). Deductions are made on the basis of 26 cases. The onset was usually between the ages of 20 and 30; 20 of the cases were women. Patients invariably have insight into the morbid character of the syndrome. This, plus the fact that the phenomena are prone to extend over all psychic experiences without exception, leads the author to suggest that the dysfunction is of cerebral origin. The use of mescaline in research is mentioned. 42 references, followed by discussion.—E. R. Hilgard (Stanford).

5736. Mayer-Gross, W. Spatial anomalies of higher motor activity. *J. Physiol.*, 1935, **85**, 9P-10P.—Patients showing constructive apraxia are able to perform all usual activities of life, but fail in tests which involve a more complex spatial order (such as direction, position, or extension). They recognize inability to copy simple patterns in mosaics or to draw the simplest drawings, but cannot correct them. Discrimination of right and left is lost and the use of single fingers is impossible.—M. A. Rubin (Clark).

5737. Molinéry, —. [The psychology of lepers.] *Paris méd.*, 1933, April 22.—R. R. Willoughby (Clark).

5738. Müller, E. Neurologisch-psychiatrische Symptomen-Komplexe bei Kohlenoxyd-Vergiftung. (Neuro-psychiatric symptom complexes in CO poisoning.) Bonn: Heidelberg, 1935. Pp. 59.—R. R. Willoughby (Clark).

5739. Neustatter, W. L. The results of 50 cases treated by psychotherapy. *Lancet*, 1935, **228**, 796-799.—Of 50 psychotics treated by psychological methods 32 improved, 16 made no significant change, and 2 became worse. A detailed analysis of the data is included.—D. J. Ingle (Mayo Foundation).

5740. Norén, K. **Psykiatrisk klinik i Uppsala.** (Psychiatric clinic in Uppsala.) *Svenska Läkartidn.*, 1935, 32, 1104-1105.—In 1929 a psychiatric clinic was established at the University of Lund, and now the parliament has approved a new clinic at Uppsala University hospital. The establishment of these two clinics marks the greatest epoch in Swedish psychiatric research during the last fifty years.—M. L. Reymert (Mooseheart Laboratory for Child Research).

5741. Patry, F. L. **Introductory remarks, section meeting: "The integration of psychiatry with education."** *Amer. J. Orthopsychiat.*, 1935, 5, 124-125.—R. R. Willoughby (Clark).

5742. Patry, F. L. **What the college student should know about present-day mental hygiene.** *J. abnorm. soc. Psychol.*, 1935, 30, 4-16.—When suffering from complaint problems concerning health, social adjustment, and emotional well-being, talk over the problems with some competent person. Seek to investigate causes of stress and strain which lead to body and mental protest in the form of complaints or symptoms. Learn to control emotions and to look beyond a period of immediate gratification. Cultivation of a sense of humor will be a tremendous lift in meeting happily daily friction and disappointment. Accept sexual nature with its occasional arousals as normal. Cultivate good habits of following a well-balanced program of work, play, rest and sleep, which will do much toward keeping out of unwholesome emotional whirlpools. See to it that ambitions are kept in fairly close contact with actual performance. Let joy come from work well done rather than in toying with day-dreams. Remember that minor conflicts during the period of emancipation from home ties, certain habits and points of view may cause feelings of disloyalty or resentment; this is not abnormal but rather is the process of shaping a philosophy of life. Cultivate the habit of winning the approval and consensus of opinion of friends concerning the validity of plans and activities.—C. H. Johnson (Boston Psychopathic Hospital).

5743. Popek, K. **Paradipsie a primární rozladová polydipsie u pětiletého psychopata.** (Paradipsia and primary ill-tempered polydipsia in a five-year-old psychopath.) *Rev. Neurol. Psychiat., Praha*, 1934, 31, No. 4, 97-106.—R. R. Willoughby (Clark).

5744. Pritchard, E. **Prognosis of mental deficiency in infants.** *Lancet*, 1935, 228, 1003-1005.—General consideration of the factors which have predictive value for prognosis of amentia.—D. J. Ingle (Mayo Foundation).

5745. Raiak, C. **La psicosis de guerra.** (The psychosis of war.) *Arch. argent. Psicol. norm. pat.*, 1935, 2, 24-27.—War psychoses are classified as: (1) psychosis *sui generis* of mobilization; (2) psychosis of combat; and (3) psychosis of armistice. All three forms are dysgenic in their ultimate influence upon social welfare.—R. M. Bellows (Ohio State).

5746. Rees, J. R. **Prognosis in the sexual neuroses.** *Lancet*, 1935, 228, 948-949.—The problem of prognosis for the sexual neuroses is really that of the psychoneurotic states in general, since the majority

of disorders of sexual life are merely symptomatic of a more general emotional disturbance. The figures of the follow-up of patients at the Institute of Medical Psychology (England) show that 76% of these patients are permanently benefited. A general classification of these disorders is given and methods of treatment are discussed.—D. J. Ingle (Mayo Foundation).

5747. Rieti, E. **Sul meccanismo psicogenetico delle allucinazioni.** (On the psychogenetic mechanism of hallucinations.) *Arch. Ital. Psicol.*, 1935, 13, 25-38.—Hallucinations manifest themselves to observers as phenomena of sensory alteration, but in essence are the resultant of the dynamism of pre-existing psychic facts; in the evolution of the hallucinations the sensory elements contribute only as concomitant factors. The errors of the sensory estimate are due to the deformed interpretation of psychic facts corresponding to a subjective reality; the deformation consists in attributing to such facts a content of objective reality. The basic element of every hallucination is the equivalence of criticism, a defense reaction which resolves an infantile complex; the directly determining element is the deviation of the attention from the sphere of external conscious symbolism to the sphere of internal unconscious symbolism.—R. E. Schwarz (V. A. Facility, Northampton, Mass.)

5748. Rosenzweig, S. **Outline of a cooperative project for validating the Rorschach test.** *Amer. J. Orthopsychiat.*, 1935, 5, 121-123.—This writer has outlined a cooperative project to determine with the accuracy of a first approximation the validity of the Rorschach as a diagnostic instrument for the functional mental disorders. The method is that of correct matchings of summaries of patients written by psychiatrists and summaries of the same patients written solely from the results of the Rorschach test.—J. McV. Hunt (Worcester State Hospital).

5749. Rybák, O. **Základy derivačního léčení.** (Factors contributing to cure.) *Rev. Neurol. Psychiat., Praha*, 1933, 30, No. 3.—R. R. Willoughby (Clark).

5750. Sears, R. **Measurements of associative learning in mentally defective cases of reading disability: evidence concerning the incidence of "word-blindness."** *J. genet. Psychol.*, 1935, 46, 391-402.—23 subjects of mean IQ 72 and mean MA 10 were given a battery of six associative learning tests devised by Gates for the investigation of reading disability. At least 19 of them made scores indicating no significant special defects of the types measured by those tests, and excluding word-blindness as an important cause. It appears that the tests in their present form do not determine significant causes of reading disabilities.—J. F. Dashiell (North Carolina).

5751. Sears, R. **Characteristics and trainability of a case of special reading disability at the moron level.** *J. juv. Res.*, 1935, 19, 135-145.—H. L. Koch (Chicago).

5752. Slater, E. **The incidence of mental disorder.** *Ann. Eugen., Camb.*, 1935, 6, 172-186.—Methods of

estimating the minimum incidence of individual mental disorder in the general population are described and criticized. Tables are presented to show the expectation of individual mental disorders and of mental disorders in general by age and sex for England and Wales. These tables are based on admissions to mental hospitals and the total population as of 1932. Comparisons with the results of other investigators are made and discrepancies discussed.—*J. W. Dunlap* (Fordham).

5753. Stevenson, G. S. **Presidential address.** Orthopsychiatry—an expression of a philosophy of function. *Amer. J. Orthopsychiat.*, 1935, 5, 87-99.—Orthopsychiatry recognizes a common interest among all effectors of human living. In ten years of bridging these fields, it has been forced to face the continuity of scientific facts and to overcome the tendency to view these facts within the boundary of the hypotheses of particular disciplines. Not a science in the narrower sense, orthopsychiatry accepts for professional practice the ability to see situations as a total picture. This principle of unity and totality of behavior forces the orthopsychiatrist to look upon the community itself as a subject. The defects and distortions of community function that interfere with effective service to its constituents may be viewed as a kind of community pathology and thus become therapeutic challenges instead of obstructions to professionally limited efforts. As in studying individuals, the orthopsychiatrist may (1) arrive at a reason for studying, (2) examine the subject, its modifiers and its products to determine status, (3) assemble these into a genetic construction, (4) search his own assets, knowledge, and tools for effecting modifications, and (5) assemble these into a future line of development continuous with that of the past, but differing in direction or speed from what would take place without his intervention.—*J. Mc V. Hunt* (Worcester State Hospital).

5754. Sullivan, H. S. **Psychiatry.** *Encycl. soc. Sci.*, 1934, 12, 578-580.—*L. A. Riggs* (Clark).

5755. Tuczak, K. **Kombination des manisch-depressiven und schizophrenen Erbkreises.** (The combination of manic-depressive and schizophrenic hereditary cycles.) *Arch. Klaus-Stift. VererbForsch.*, 1933, 8, 295-378.—*R. R. Willoughby* (Clark).

5756. Van der Hoop, J. H. **Persönliches, Unpersönliches und Ueberpersönliches in der Psychotherapie.** (The personal, impersonal and suprapersonal in psychotherapy.) *Zbl. Psychother.*, 1935, 8, 162-174.—The author raises the questions: How far is an impersonal technique possible and what is its influence on the personal relationship between physician and patient? How far can instinctive conflicts and suprapersonal values be objectified? Are ideals conditioned wholly objectively, or can their subjective bases be examined objectively? His viewpoint is: Objective study allows examination of the present value of rigidly formulated ideals, but it will not lead to the creation of new ideals. Although an individual's ideals are relative, they are also the expression of entelechy. Therefore an impersonal

study involves not only their historical causation but also their relationship to the personality structure and its developmental possibilities. The danger of our age is that the impersonal will mechanize human relationships and that these will then be considered the essential nature of man and society. The psychological schema is not to be identified with the living reality, but the personal and suprapersonal must be developed through the impersonal.—*M. E. Morse* (Baltimore).

5757. Vermeylen, G. **Hallucinations et niveau mental.** (Hallucinations and mental level.) *Ann. méd.-psychol.*, 1934, 92, Part 2, 429-440.—21 cases of chronic hallucinatory psychosis were examined with practical tests necessitating the use of all intellectual functions. All patients showed some lowering of the mental level. The lowering of the mental level is considered a result of the hallucinations and not a cause, but its presence makes the evolution of the psychosis more rapid. Thus patients with originally low intelligence reach a terminal stage more quickly than those originally more intelligent. The intellectual branches most affected in chronic hallucinatory psychosis were found to be judgment, reasoning, analysis, and synthesis, rather than attention, memory, and association of ideas. A temporary diminution of the capacity for action of intelligence ("phrenolepsy") is more common than real dementia, and frequently precedes it. During this state of phrenolepsy as found in chronic hallucinatory psychosis there is an affective or characterological dementia which manifests itself in action and leads to a system of delusions.—*M. B. Mitchell* (New Hampshire State Hospital).

5758. Wengraf, F. **Psychotherapie des Frauenarztes.** (Psychotherapy for the woman physician.) Leipzig: Hermann & Schulze, 1934. Pp. 251. RM. 18.00.—*R. R. Willoughby* (Clark).

5759. Yaskin, J. C. **The feeling of unreality, as a differential symptom of mild depression.** *Arch. Neurol. Psychiat.*, Chicago, 1935, 33, 368-378.—In a series of 28 cases of mild extramural depression the "feeling of unreality" was a constant symptom. It is suggested, therefore, as useful in differential diagnosis.—*D. G. Marquis* (Oxford, England).

5760. Zimmer, H. **Indische Anschauungen über Psychotherapie.** (Hindu views of psychotherapy.) *Zbl. Psychother.*, 1935, 8, 147-162.—Zimmer discusses the nature and aims of Hindu psychotherapy (more exactly a life-long prophylactic psychagogy or psychodietetics); its attitude toward the unconscious; the problems which it is designed to meet; and its meaning for Western psychotherapy. To the Hindu the unconscious is near and friendly, and he finds his true being in the collective unconscious. The question as to the problems in which Hindu psychagogy originated has scarcely been raised. The father-son conflict is not prominent, and the caste system eliminates the striving for power. For the masses the ritual ordering of life is sufficient, but the exceptional individual cannot reach his innermost self in this way. He must follow the yoga, which aims to go beyond both the

individual and the collective unconscious. By revealing a relationship to the unconscious very different from the current Western conception, Hindu psychagogy opens up a wide field for the psychotherapy of the future. Perhaps we shall develop a synthetic psychodietetics by combining Hindu procedures with Western material.—*M. E. Morse* (Baltimore).

[See also abstracts 5427, 5432, 5462, 5478, 5536, 5602, 5605, 5607, 5672, 5683, 5688, 5784, 5785, 5808, 5810, 5821, 5832, 5867, 5878, 5919, 6015, 6032, 6042, 6052.]

#### PERSONALITY AND CHARACTER

5761. *Amir, M. I tipi costituzionali fra i delinquenti di Giava.* (Constitutional types among the delinquents of Java.) *Arch. Antrop. crim.*, 1935, 55, 393-398.—This is a statistical study of the constitutional types found among the criminals in the Dutch East Indies. The author found: (1) the proportions of the various constitutional types among the non-psychopathic adult delinquents do not differ a great deal from the proportions found in the population not under the rule of the Netherlands; (2) the dysplastic types are much more frequent among the psychopathic young delinquents (from 21 to 37%); (3) the athletic and pyknic types prevail among the psychopathic murderers (together 80%).—*R. E. Schwarz* (V. A. Facility, Northampton, Mass.)

5762. *Beck, S. J. Problems of further research in the Rorschach test.* *Amer. J. Orthopsychiat.*, 1935, 5, 100-115.—The author summarizes his reactions to practice in Zürich with this test as follows: (1) that breadth and diversity of experience is the road to successful practical diagnosis; (2) that the procedure smacks of the approach of the artist; (3) that such liberties of method as inconstancy of scoring a particular reaction are commonly taken. These practices suggest the following problems of further research with the Rorschach: (1) find constant, experimentally tested criteria for the rare detail (Dr); (2) standardize statistically the responses representing good (F+) and bad (F-) form; (3) establish frequency-tables for the color responses and determine experimentally whether the tables or the subject's report is the more dependable criterion for color responses; (4) identify experimentally the true movement response; (5) determine whether and why the various Rorschach responses point to the psychological processes reported; (6) continue work with clinical groups; (7) consider the comparative value of the same trait in different kinds of personalities; (8) determine the significance of the content of responses.—*J. Mc V. Hunt* (Worcester State Hospital).

5763. *Davis, F. B., & Rulon, P. J. Gossip and the introvert.* *J. abnorm. soc. Psychol.*, 1935, 30, 17-21.—From tests administered by E. R. Guthrie and at the Bridgewater, Massachusetts, State Teachers College, the results indicate that the introvert is about as familiar with the everyday happenings in his environment as the extrovert is, and any difference between the two psychological types with respect to this feature of their mental lives must be sought in the extent

to which they use these happenings as their stock for conversation or intellectual rumination.—*C. H. Johnson* (Boston Psychopathic Hospital).

5764. *Edwards, J. Personality pointers.* Indianapolis: Bobbs-Merrill, 1935. Pp. 254. \$1.50.—*R. R. Willoughby* (Clark).

5765. *Erdős, L. Idő és jellem.* (Time and character.) *Mag. psychol. Szle*, 1934, 7, No. 3/4, 67-73.—Time and character are related in many ways. Men emphasize in their attitudes the past, present or future. Most individuals alter their attitudes from one emphasis to another in the course of their lives. A further relation is seen in characterological differences with regard to the timing of behavior: many people fail to select the proper time for their activities, while others believe that what is suitable now or sometimes is always permissible. This is also true of the domination of mental concepts: philosophy is full of examples of false generalizations. A fundamental human fallacy is the desire to prolong the present, whereas most values are essentially temporary. Striving after goodness is the root of an inferiority feeling, based on self-deprecation in comparison to the ideal, which operates not only within but also beyond the borders of our ability. Inversely, certain mental traits are frequently applied only to the present moment even when they could be used at all times, such as faith, honesty and other timeless moral concepts.—*H. Beaumont* (Kentucky).

5766. *Field, J. A life of one's own.* London: Chatto & Windus, 1934. Pp. xxii + 251. 7/6.—This is a psychological autobiography, and tells how the writer got very tangled up in her way of life and how she found the solution to her difficulties.—*F. C. Bartlett* (Cambridge, England).

5767. *Harriman, P. L. The Rorschach test applied to a group of college students.* *Amer. J. Orthopsychiat.*, 1935, 5, 116-120.—In order to establish norms for subjects of the college level, the Rorschach test was given to 50 college men and 50 college women. These students perceived the blots as wholes having clear form. A tendency for men to have sharper perceptions than women appeared. Perceptions of movement were slightly, but significantly, more numerous than the color responses, indicating that young adults have achieved a reasonable control of their affective and conative dispositions. The writer feels that the Rorschach test gave a true picture of the personalities of those students with whom he was acquainted, but he considers that the present unsatisfactory state of the norms for the test necessitates only tentative conclusions.—*J. Mc V. Hunt* (Worcester State Hospital).

5768. *Heidenhain, A. Ueber den Menschenhass. Eine pathographische Untersuchung ueber Jonathan Swift.* Stuttgart: 1934. Pp. 118.—A psychological interpretation of misanthropy is presented herein through an analysis of the behavior of Jonathan Swift. On the basis of the complete editions of Swift's works, letters, and various documents of his contemporaries, the author attempts to solve the problem presented by Swift's contradictory mental qualities. Swift was

an extravert, but highly egocentric and ambitious for power; he was incapable of establishing a family, but unwilling to forego the companionship of women; he was generous and philanthropic, but a sordid miser; he was an apostle of education, but the bitterest denouncer of humanity. Scheler's analyses of hatred and contempt, applied to Swift's personality, permit one to regard the latter as a perpetually disillusioned individual whose human ideal collapses in contact with reality, and whose aspiration for power is continually frustrated, so as to arouse aversion, not toward particular individuals but toward mankind in general or toward special groups, as for example women. His aim in writing was to torture the world, rather than to amuse it, thus betraying a sadistic tendency. This medico-psychological study has Freudian leanings, but avoids and condemns the interpretations of Ferenczi.—R. E. Schwarz (V. A. Facility, Northampton, Mass.)

**5769. Hersloff, N. B. A concept of personality formation.** *Med. Rec., N. Y.*, 1935, 142, 229-232.—The state of early infantile dependency and inability to differentiate between parents is discussed. With the development of an ability to differentiate, the boy responds to his natural impulses for greater affection for the mother, and becomes aware of a feeling of competition with the father. The suppressed negative affect arising from this competition causes anxiety development over an anticipated annihilation by his father, which is the projection of his own antagonistic attitude toward his father. To preserve life, avoid anticipated annihilation, and secure relief from anxiety, the compromise solution of relinquishing masculinity and adopting femininity may be employed. Thus interest in the mother could then be manifested as of a feminine character, thereby permitting the child to appeal to the homosexual components in both parents. The author summarizes: "The adoption of a feminine personality by the male progeny denies masculine competition with the father and other men. It necessitates the relinquishment of the aggressive instincts as expressed externally and allows an overdetermined submissive attitude toward life and males."—M. H. Erickson (Eloise Hospital).

**5770. Kirihsara, H. Adaptation and revision of a non-verbal will-temperament test.** *Rep. Inst. Sci. Labour, Kurasiki*, 1935, No. 30. Pp. 14.—The author reports the revision of the Downey-Uhrbrock will-temperament tests, undertaken to make them more applicable to Japanese use. Standard deviation and percentile norms and reliability data are presented.—R. Smith (Clark).

**5771. Kulp, D. H. Concepts in attitude tests.** *Sociol. soc. Res.*, 1935, 19, 218-223.—The words *attitude, opinion, fact, judgment, belief*, are used interchangeably, with resulting confusion. Definitions and examples, submitted to 28 members of the American Sociological Society, showed that due to uncertainty in distinguishing judgments and beliefs it was difficult to interpret them in relation to attitudes. Facts were readily recognized, but could not be used indiscriminately in test making because to agree or

disagree was a matter of judgment of "factness," not of attitude. Attitude items expressed in the form defined by the author, i.e., a behavior tendency with reference to a value, were most readily recognized. Straightforward phrasing in attitude test construction is needed.—J. R. Hilgard (Stanford).

**5772. Landis, C., Zubin, J., & Katz, S. E. Empirical evaluation of three personality adjustment inventories.** *J. educ. Psychol.*, 1935, 26, 321-330.—The study reports an attempt to determine the validity of the Bernreuter Personality Inventory, the Page Questionnaire of Schizophrenic Traits, and the Maller Character Sketches by comparing the performance of mental hospital patients (schizophrenic, manic-depressive, psychoneurotic, and paretic) and normal adults. The normal and abnormal subjects were matched with respect to age, intelligence, academic status, occupation, racial extraction, religion, and nativity. The Bernreuter and Page tests did not differentiate between abnormal and normal individuals, and although the Maller test gave significantly different scores for the two groups there was considerable overlap of the distributions. An item analysis showed that the lack of differentiation can be attributed to the *logical* rather than the empirical evaluation of the items, e.g., normals say significantly more often than the abnormals that they day-dream frequently. An empirical evaluation of the test items yielded a scale which seems to differentiate normals from abnormals, as well as the various psychiatric categories. The new tentative scale is not given.—A. W. Melton (Missouri).

**5773. McCartney, J. L., & Papurt, M. J. Preliminary report on an objective personal data questionnaire.** *J. abnorm. soc. Psychol.*, 1935, 30, 95-106.—Questions included in the test were selected upon the basis of diagnostic value, statistical validity, and clarity of meaning of the language used. It was administered to 235 inmates of the Elmira Reformatory. The temporary restricted had the lowest percentage of pathological answers, the prolonged tractables were second, and the prolonged intractables had the highest percentage of pathological answers.—C. H. Johnson (Boston Psychopathic Hospital).

**5774. Olson, W. C. General survey of the field of character and personality measurement.** *Rev. educ. Res.*, 1935, 5, 242-244.—A review of the literature from January, 1932, to January, 1935. Recent reviews, books and new journals in this field are noted. Bibliography of 19 titles.—S. P. Hayes, Jr. (Mt. Holyoke).

**5775. Olson, W. C. Measures of character and personality through conduct and information.** *Rev. educ. Res.*, 1935, 5, 273-290.—A review of the literature from January, 1932, to January, 1935. The following are treated: (1) contributions to technique, including systematic observation, ratings, tests, expressive movements, psychogalvanic studies, physiological studies, inventories, factor analysis; (2) characteristics, traits and constellations of behavior, including delinquency, character and personality scales, developmental ages, emotions, eating behavior,

friendship and quarreling, honesty, humor, leadership and popularity, negativism, "only" children, play, recklessness, social and ethical information, socio-economic factors, studiousness, and vocalization; (3) the patterning of character and personality measures; (4) the modification of information and conduct, including direct and indirect instruction, motivation and the effect of organization membership. Bibliography of 161 titles.—*S. P. Hayes, Jr.* (Mt. Holyoke).

5776. Pintner, R., & Forlano, G. *Sibling resemblance on two personality tests.* *Sch. & Soc.*, 1935, 42, 70-72.—Two personality tests of the questionnaire type and a very short group intelligence test, in the derivation of all of which one or the other of the authors was concerned, were given to 137 sibling pairs in grades 4 to 8. The inter-sibling correlation in the case of the intelligence test (.23) was not lower than those for the personality tests (.19, .20). A grouping of the sibling pairs into three groups according to the age span which separated the pair members leads to no evidence that siblings similar in age are more alike than those differing more widely in this trait. On most of the tests and subtests siblings of the same sex resembled each other more than did those of unlike sex. The personality tests for the groups employed had reliability coefficients of .88 and .83, respectively, and correlated insignificantly with MA and CA.—*H. L. Koch* (Chicago).

5777. Roback, A. A. *Psicología del carácter.* (Psychology of character.) (Trans. by Santos Rubiano.) Madrid: Daniel Jorro, 1935. Pp. 668, 15 pesetas.—See II: 3140.—*R. R. Willoughby* (Clark).

5778. Sapir, E. *Personality.* *Encycl. soc. Sci.*, 1934, 12, 85-88.—*L. A. Riggs* (Clark).

5779. Schuler, E. A. *A study of the consistency of dominant and submissive behavior in adolescent boys.* *J. genet. Psychol.*, 1935, 46, 403-432.—Data on junior and senior high school boys were obtained in the following forms: (1) dominant-submissive ratings by several teachers, (2) self-ratings, (3) ratings by parents, (4) experimental data (experimenter observing boys working in pairs on set problems), (5) IQ's, (6) chronological ages. These various sets of data were combined in many pairs, as (1) with (2), (1) with (3), etc. Some generalizations concerning age change seemed warranted. There was modification away from extreme D or S and toward more conventional behavior. If minute samples of behavior be considered the older boys revealed more heterogeneity. However, the type of behavior became more defined and predictable (D or S type more readily ascertained) within one general environment, but less so for different general environments.—*J. F. Dashiell* (North Carolina).

5780. Seifert, F. *Die Geschlechterpolarität als psychologisches Problem.* (Polarity of sexes as a psychological problem.) *Neue psychol. Stud.*, 1934, 12, Heft 2, 69-80.—With the abandonment of the rationalistic point of view by the new psychology, the problem of the fundamental difference between the

sexes comes again to the fore. The author quotes the opinions of Klages and of the German romantics on this subject, and comes to the conclusion that the category of polarity is an adequate one for the formulation of the problem.—*E. Hanfmann* (Worcester State Hospital).

5781. Sokolov, B. F. *The achievement of happiness.* New York: Simon & Schuster, 1935. Pp. 271. \$2.25.—*R. R. Willoughby* (Clark).

5782. Symonds, P. M., & Jackson, C. E. *Measurement of the personality adjustments of high school pupils.* New York: Teachers College, Columbia Univ., 1935. Pp. xi + 110. \$1.00.—The development and validation of (1) an adjustment questionnaire of 100 items in multiple response form, and (2) an identification sheet of 50 items, are explained. The former is answered by the student about himself, whereas in the latter the student identifies those of his fellows who fit into given patterns. A factor analysis (Thurstone method) is carried out on the identification sheet. An attitude scale on "What kind of a year are you having?" was developed in two forms of 22 items each, by the Thurstone technique, and applied. Miscellaneous other methods of obtaining data to give an all-round picture of the personality adjustments of adolescents were tried: reputation for accomplishment, autobiography, self-ordinary-ideal rating, interviewing and case study. Relationship between school marks, achievement, conduct, and intelligence is considered. Many comparisons are made and considerable tabular data are given. The adjustment questionnaire and the attitude scales are not given in full. "The main value of these instruments resides in their use in making adjustment surveys in schools and classes." The book is indexed.—*J. M. Stalnaker* (Chicago).

5783. Vernon, P. E. *The measurement of personality and temperament.* *Hum. Factor, Lond.*, 1934, 8, 87-95.—A temperament or personality trait differs in many respects from an aptitude or ability. It cannot be defined solely in terms of objective behavior, but is dependent upon the observation and interpretation of such behavior by human minds. Furthermore, it is impossible to find distinct dividing lines between different traits, or to isolate any one trait as more fundamental than another. A single test, or set of ratings, cannot give an adequate measure of a trait; instead, a variety of diverse tests should be combined into a composite score. In personality testing no objective criterion of validity is available, but the intercorrelations within such a composite indicate its theoretical validity. Elaborate statistical treatment, however, is unjustifiable owing to the inherent subjectivity of the trait concept.—*P. E. Vernon* (Cambridge, England).

5784. Völgyesi, F. *Die seelischen Konstitutionen und die Indikationen der Psychotherapie.* (Psychic constitutions and the indications for psychotherapy.) *Zbl. Psychother.*, 1935, 8, 174-196.—Völgyesi reviews his schema of psychic constitutional types, which grew out of his experience with suggestion, and his method of "psychoconditioning," based on his

vasomotor reversible decerebration theory of hypnosis. His typology is founded on the principles that psychic constitution is closely coördinated with gross and microscopic brain structure and conditions of progressive cerebration, and that the development of the various lobes is recognizable from the cranial contour. Every person can be classified by the form of his forehead and the color of his face (blood distribution) as either a psycho-active non-suggestible or a psycho-passive hyper-suggestible type. The first group tends toward obsession neuroses and paranoia, the second toward hysteria. The psycho-passive constitution predominates greatly in both sexes, among all races, and also among neurotics. Hence the most successful psychotherapy is hypnosis. The indications for psychotherapy and its possibilities, in both functional and organic diseases, depend more on constitutional suggestibility than on the diagnosis, and every method has hypnotic components.—*M. E. Morse* (Baltimore).

**5785. Watson, G. Mental hygiene and emotional adjustment.** *Rev. educ. Res.*, 1935, 5, 245-258.—A review of the literature from January, 1932, to January, 1935. The following are covered: instruments of self-report; applications of self-report instruments; traits tested by behavior; physiological and laboratory tests; the treatment of extreme cases turned up during testing; tests related to unconscious reactions; typology; and the psychoses. Bibliography of 123 titles.—*S. P. Hayes, Jr.* (Mt. Holyoke).

**5786. Watson, G. Social attitudes.** *Rev. educ. Res.*, 1935, 5, 259-272.—A review of the literature from January, 1932, to January, 1935. Changing attitudes, partly with direct reference to changing economic conditions; correlates of social attitudes with various other factors; moral values and religious attitudes; general and vocational tests; certain new tests; and contributions to technique are surveyed. Bibliography of 113 titles.—*S. P. Hayes, Jr.* (Mt. Holyoke).

**5787. Whitaker, E. "Tests" de carácter de Heuyer, Courtial, Dublineau e Neron.** (Tests of character by Heuyer, Courtial, Dublineau and Neron.) *Rev. Neurol. Psychiat. S. Paulo*, 1935, 1, 238-252.—A Portuguese version of the tests indicated above. They are character tests for children and adolescents above 13 years of age.—*R. M. Bellows* (Ohio State).

**5788. Wodehouse, H. Egotism and morality.** *Brit. J. educ. Psychol.*, 1935, 5, 200-211.—A critical discussion of Philip Leon's book *The Ethics of Power, or the Problem of Evil*. Emphasis is laid on Leon's contrast between the tendency to individual domination, egotism, and the moral trend toward a status of social unity and equality. Modification is desired for school purposes. An egotism more or less recognized but subordinated may play a useful role, as in competitive games. Self-assertion may be stripped of egotism, leaving a purified basis that is indispensable. Innocent ambitions have their place in assisting moral growth in the young, with a necessary distinction

between true egotism and the sense of vocation.—*K. M. Cowdry* (Stanford).

[See also abstracts 5424, 5449, 5450, 5598, 5631, 5697, 5722, 5727, 5793, 5831, 5844, 5851, 5874, 5920, 5948, 5958, 5961, 6031, 6048, 6052.]

#### SOCIAL FUNCTIONS OF THE INDIVIDUAL

**5789. Abaev, V. Yazyk kak ideologiya i yazyk kak tekhnika.** (Speech as ideology and as technics.) *Yazyk i Myshlenie*, 1934, 2, 33-54.—The entire development of human speech underlies the process of technics, which is called the process of semantic narrowing or specialization. When it becomes a part of speech practice each word in the beginning operates in only one function and so becomes either a noun or a verb. Morphology has come into existence in this manner. In addition, two laws operate in the transformation of speech, that of socialization and that of imitation. The second law corresponds to the law of inertia in physics. Speech alters itself only enough so that each new generation can make itself understood with the older. This law must be regarded as a true element of the new theory of speech.—*E. Kagarov* (Leningrad).

**5790. Alexander, F., & Healy, W. Roots of crime; psychoanalytic studies.** New York: Knopf, 1935. Pp. viii + 305 + iv. \$3.00.—The body of the book consists of résumés of seven short analyses of criminals by Alexander, plus four unsuccessful attempts. Supplementary material includes an introduction setting forth the standpoint of the study, a chapter on the interplay of social and psychological factors, and one on practical conclusions. Particular attention is given to the comparison of the psychoanalytic material with the social history material, gathered many years previously by the Judge Baker Foundation on the same individuals.—*R. R. Willoughby* (Clark).

**5791. Anderson, N. Vagrancy.** *Encycl. Soc. Sci.*, 1935, 15, 205-208.—*L. A. Riggs* (Clark).

**5792. Arimond, H. Einführung in die Wissenschaft von der Publizistik auf sozialpsychologischer Grundlage.** (Introduction to the science of publicity on a socio-psychological basis.) Munich: Inst. f. Zeitungswiss., 1935. Pp. 91. RM. 3.50.—*R. R. Willoughby* (Clark).

**5793. Beer, S. J. Crime, character, education.** Inglewood, Cal.: Author, 1935. Pp. x + 190. \$2.00.—This publication of the National Crime Prevention Council, Inc., with headquarters at Los Angeles, consists almost entirely of quotations from ministers, social workers, criminologists and educators, as well as editorials from various papers on crime prevention and character education.—*E. A. Kirkpatrick* (Leominster, Mass.)

**5794. Berardinelli, W., & Mendonça, J. L. Biotypologia criminal.** (Criminal biotyping.) Rio de Janeiro: 1933. Pp. 183.—A study of the morphology of individual criminals, using criteria somewhat analogous to Kretschmer's.—*H. E. Burtt* (Ohio State).

5795. Berenini, A. *Capacità a delinquere e pericolosità criminale.* (Capacity to commit crimes and criminal dangerousness.) *Arch. Antrop. crim.*, 1935, 55, 225-238.—In this article the author defends the anthropological and positivistic penal conception of Cesare Lombroso, Enrico Ferri and Raffaele Garofalo. The object of this study is to determine the relationship between the capacity to commit crimes and criminal dangerousness with a view to taking the necessary measures for social defense, which is to be guided not by the present offense but by the danger of new offenses. For this purpose it is necessary for the judge to follow the *iter criminis* (path of the crime) backwards, from the deed to the mind that has conceived it and willed it, and from external manifestations to the innermost motives.—R. E. Schwarz (V. A. Facility, Northampton, Mass.)

5796. Bernard, L. L. *Social psychology.* *Encycl. soc. Sci.*, 1934, 14, 151-157.—A definition of the field of social psychology, with a survey of its historical development and its modern status in relation to psychological theory.—L. A. Riggs (Clark).

5797. Beveridge, W. M. *Racial differences in phenomenal regression.* *Brit. J. Psychol.*, 1935, 26, 59-62.—Educated West African natives, students of drawing at a Presbyterian training college, showed an index of phenomenal regression for shape and size which was higher than that of Europeans. The mean phenomenal character for the Africans lay midway between that for the Europeans and the real character. Thouless adds a note showing that the results for the Africans are closely similar to those for a group of Indian students.—M. D. Vernon (Cambridge, England).

5798. Boas, F. *Race.* *Encycl. soc. Sci.*, 1934, 13, 25-36.—L. A. Riggs (Clark).

5799. Bunzel, B. *Suicide.* *Encycl. soc. Sci.*, 1934, 14, 455-459.—L. A. Riggs (Clark).

5800. Buswell, G. T. *How people look at pictures: a study of the psychology and perception in art.* Chicago: Univ. Chicago Press, 1935. Pp. 198. \$3.00.—Photographic records were made of the eye movements of 200 subjects while they were looking at pictures of paintings (colored and uncolored), of vases and dishes, of furniture and design, of statuary and museum pieces, of tapestries, buildings, posters, outlines, and geometric figures. 67 plates and 10 tables illustrate and summarize the results. Records were made both of direction and duration of movement. Color has little effect on eye movement, which, however, is influenced by the instructions given the subject, by training in art, and by the length of time that the picture is inspected.—W. S. Hunter (Clark).

5801. Cantor, N. *Recidivism.* *Encycl. soc. Sci.*, 1934, 13, 157-160.—L. A. Riggs (Clark).

5802. Carhart, R. *A method of using the Gault teletactor to teach speech rhythms.* *Amer. Ann. Deaf*, 1935, 80, 260-263.—A brief statement of the manner in which the Gault teletactor has been adapted to the problem of teaching the rhythms of

speech to deaf children.—C. V. Hudgins (Clarke School).

5803. Corlett, W. T. *The medicine-man of the American Indian and his cultural background.* Springfield, Ill.; Baltimore: Charles C. Thomas, 1935. Pp. 369. \$5.00.—R. R. Willoughby (Clark).

5804. Courbon, P. *Psychophysiologie du suicide.* (Psychophysiology of suicide.) *Ann. méd.-psychol.*, 1934, 92, 384-397.—Between pathological suicide and non-pathological suicide there are all gradations. All suicides are abnormal, but not all are pathological. A disgust with life combined with impulsiveness is conducive to suicide. Social conditions may lead some people to kill themselves, but the same conditions would not have the same effect on all people. Fear of death is a great inhibiting force. It is strong in Christian civilizations, but not in all others. In cases of anxiety the act of suicide is not the result of a lucid choice. The motives for suicide may be moral, altruistic, or egotistic. The biological mechanism is the same for pseudo-suicide or sacrifice as for other kinds.—M. B. Mitchell (New Hampshire State Hospital).

5805. Daugherty, M. *Sex worship and disease (phallic worship): a scientific treatise on religions and symbolism, with special reference to disease of the sexual organs.* Cleveland: Author, 1935. Pp. 240. \$3.50.—R. R. Willoughby (Clark).

5806. Den Hollander, A. N. J. *De peyote-cultuur der Noordamerikaansche Indianen.* Slot. (The peyote culture of the North American Indians. Conclusion.) *Mensch en Maatsch.*, 1935, 11, 123-131.—R. R. Willoughby (Clark).

5807. Dodd, S. C. *A social distance test in the Near East.* *Amer. J. Sociol.*, 1935, 41, 194-204.—Five statements of attitude ranging from friendly to hostile were so chosen, from a set of thirty-nine statements by the ratings of sixty judges, as to secure (a) equidistance between statements, (b) minimal ambiguity, (c) maximal reliability. Four tests were constructed applying these five statements to fifteen national groups, eleven religious groups, five economic levels, and three educational levels in the Near East. On correlating the tests as given to 170 freshmen with the results from a repetition after a month, the distances between groups showed reliability correlations varying from .70 to .96. Tables of the 174 distances between all pairs of groups and between in-groups and out-groups were computed. This technique yields possibilities of quantitative definitions of various sociological concepts. Economic groups desire to ascend, but they prefer to remain in familiar in-groups rather than become too intimate with a very different out-group. An experimental attempt was made to modify religious distances through a college course. The greatest gain in friendliness was toward the Bahais and the Jews.—(Courtesy *Amer. J. Sociol.*)

5808. Doll, E. A. *A genetic scale of social maturity.* *Amer. J. Orthopsychiat.*, 1935, 5, 180-190.—Out of several years of work with scales for measuring occupational progress, industrial virtues, behavioral

development, and other factors a new scale of social maturity has been devised which is to provide a standard measure of social competence. The principles and methods of Binet and Simon have been followed. The scale involves the method of report rather than the method of examination and observation and consists of 117 items, covering social behavior from infancy through adult life. It has been administered to 15 normal subjects and to 50 mentally deficient patients at the Training School at Vineland. The scaling of the items as applied to mentally deficient subjects shows a high correlation with mental age and a slight dependence on chronological age. The average SQ for socially and intellectually superior subjects was 121, with no appreciable sex differences. Fairly high correlations were also obtained between the supervisors' rankings of social age and the results from the scale. Results obtained from two informants on the same subjects differed by less than half a year. Institutional restrictions were usually found to be justifiably related to incapacity.—*J. McV. Hunt* (Worcester State Hospital).

5809. Durea, M. A. **A survey of the extent and nature of offenses committed by delinquent boys.** *J. juv. Res.*, 1935, 19, 62-74.—The 1148 offenses of 368 boys confined in an institution for white juvenile delinquents were analyzed. Most of these delinquents were multiple offenders. The five commonest types of offense in the order of the frequency of their occurrence were: stealing, incorrigibility, burglary, truancy, and larceny. Delinquencies involving acquisitive behavior predominated over those involving non-acquisitive, while those against property exceeded those directed against persons or those characterized by the violation of social decency. Those subjects whose first offense was truancy tended to be younger than those whose initial delinquency was incorrigibility, stealing, larceny, or burglary. When the first delinquency is considered, those boys charged with larceny tended to be older than those charged with incorrigibility or stealing. A negative correlation obtained between the reputed seriousness of the various types of offense and the incidence of their occurrence.—*H. L. Koch* (Chicago).

5810. Edgar, I. I. **Shakespeare's psychopathological knowledge: a study in criticism and interpretation.** *J. abnorm. soc. Psychol.*, 1935, 30, 70-83.—The greatness of William Shakespeare rests almost entirely upon his vivid sense of observation, upon his uncanny psychological insight into human nature and upon his genuine ability, as the true creative artist, to synthesize by means of his imagination the play of the human passions into living poetry and drama. Because the abnormal states of mind came within the range of his mighty vision, and because he endowed his delineations of these states of mind with truth, intensity and power, he has been falsely raised to the pinnacle of special knowledge in psychopathology. Frequent reference is made to other authors on Shakespeare.—*C. H. Johnson* (Boston Psychopathic Hospital).

5811. Edwards, L. P. **Religious sectarianism and race prejudice.** *Amer. J. Sociol.*, 1935, 41, 167-179.—

Religious sectarianism may on occasions mitigate race prejudice, but among the vast majority of members of most sects race prejudice is dominant over sectarianism. In certain cases they are hardly distinguishable. That which gives sectarianism greater power over patriotism or race consciousness is mystical experience. The religious sect has an enduring cultural value.—(Courtesy *Amer. J. Sociol.*)

5812. Fenton, N. **The delinquent boy and the correctional school.** Pomona, Calif.: Progress-Bulletin Press, 1935. Pp. 182. \$1.50.—Fenton presents a survey of the Whittier State School for delinquent boys, near Los Angeles. The first chapter describes the evolution of this school, considering the term "reform" and its implications, segregation by age, etc. There are chapters on the individualization of delinquent boys and the Child Guidance Conference. A chapter is devoted to a statistical study of selected characteristics of 400 boys at the Whittier School. There is an analysis of the boys' own stories, touching upon attitudes toward home and family situations, and a description of the interview technique by which they were obtained. The author discusses the interrelationships among the traits of these boys, especially among those concerning age, home conditions, and immorality. He states the problem of academic and vocational education at Whittier, with stress upon social guidance in a correctional school, including the efforts taken at Whittier to prepare the boy for return to the community; a chapter is devoted to vocational placement after release. A postscript, two appendices, a bibliography of 225 items, and a brief index complete the work.—*L. Balsam* (Clark).

5813. Gatti, A. **Ricerche sulle componenti psicologiche delle parole.** (Investigations into the psychological components of words.) *Arch. ital. Psicol.*, 1935, 13, 92-122.—By means of investigations conducted by the method of experimental introspection, the author determines the genesis of the non-conceptual components of the meaning of words. Results from the examination of the introspections of many subjects prove that there exists in all words a non-conceptual moment which combines with the logical meaning into a single synthesis. Representative schemes are formed, owing to past experiences or to the experiences due to present contingencies in the life of each subject. The concrete words, more than the others, afford such schemes; whereas the words usually accompanied by affective responses show themselves in continuous evolution. The author asserts further that words are regarded as components of the personality whose dispositions they may influence according to the subjective substratum which accompanies the meaning.—*R. E. Schwarz* (V. A. Facility, Northampton, Mass.)

5814. Glueck, E. T. **The family, the school, and crime.** *Harv. Teach. Rec.*, 1935, 5, 71-81.—The most fundamental approach to the control of crime involves the concentration of many social forces and agencies upon the task of prevention and the early recognition and treatment of young offenders. At the door of the grade school is placed the responsibility for the early recognition of delinquency and at least parti-

pation in a treatment program, for the families of delinquents are as a rule unable to participate constructively in the supervision and treatment of young offenders and few delinquents enter high school. The extension of school facilities for evening and afternoon use and the provision of facilities for adult education may help to reduce the causes of crime. The teaching of a living ethics may also help greatly. But it is in the discovery of delinquent tendencies and in the treatment of the conditions giving rise to them that the school can make its most unique and effective contribution.—S. P. Hayes, Jr. (Mt. Holyoke).

5815. Harris, A. L., & Spero, S. D. **Negro problem.** *Encycl. soc. Sci.*, 1933, 11, 335-355.—A comprehensive outline of social, economic, political and cultural factors in the problem of the American negro.—L. A. Riggs (Clark).

5816. Hart, H. **Age combinations at marriage as a partial index of probable success in marriage.** *Marriage Hyg.*, 1935, 1, 361-370.—The article is based largely on a chapter in *Personality and the Family*, by Hornell and Ella Hart (see IX: 4706).—A. B. Hunter (Clark).

5817. Hellwig, A. **Seelische Hemmungen bei Verwendung des mechanischen Protokolls.** (Psychic inhibitions in the use of the mechanical protocol.) *Krim. Mh.*, 1935, 9, 145-148.—At the close of a series of experiments by the Berlin Police Institute on the use of sound-recording devices in the examination of witnesses, Hellwig concludes that they represent a decided advance. Some judges and police officials are prejudiced against the method because it shows up defects (unsuspected and unacknowledged) in their technique. Hellwig pleads with them to overcome their sensitiveness and welcome sound records in the interests of a better control of the procedure and as an opportunity to study their methods objectively and thus improve them. Moreover, a sound record is a protection for both the examiner and the defendant.—M. E. Morse (Baltimore).

5818. Hentig, H. v. **Punishment.** *Encycl. soc. Sci.*, 1934, 12, 712-716.—L. A. Riggs (Clark).

5819. Herskovits, M. J. **Race mixture.** *Encycl. soc. Sci.*, 1934, 13, 41-43.—L. A. Riggs (Clark).

5820. Inbau, F. E. **Detection of deception technique admitted as evidence.** *J. crim. Law Criminol.*, 1935, 26, 262-270.—An actual case in which the evidence of deception as based upon the use of the Keeler Polygraph (see IX: 318) was admitted in a jury trial is described. The necessity of competently trained examiners is emphasized.—L. Ackerson (Institute for Juvenile Research).

5821. Jacobus, X. **Crossways of sex; study in eroto-pathology.** Milwaukee: Caspar, Krueger, Dory, 1935. Pp. 380. \$5.00.—R. R. Willoughby (Clark).

5822. Kinberg, O. **Basic problems of criminology.** Copenhagen: Levin & Munksgaard, 1935. Pp. 436. 20 kr.—Kinberg covers the entire field of criminology, but discusses particularly the most frequent problems; Scandinavian crime problems are also stressed. He discusses the influence of the mental

state of the criminal upon the official reaction to the crime, and touches upon various punishment ideas of primitive peoples, e.g., the early Romans, the Teutons, and the Scandinavians, early and modern. He places considerable stress upon the psycho-physiological aspects of the will problem, tracing connections between physical and mental functions affecting criminal acts. A chapter is devoted to scientific criminology, in which the attitudes of the positivist school and of the Italian idealists are briefly reviewed. Chapters are also given to criminology and responsibility, the causes of crime, recent medical and biological findings of criminological importance, and "imputability." There are chapters on the examination and treatment of criminals and on the training of wardens and other officials dealing with crime. The author concludes with a chapter on general preventive measures. There is strong emphasis upon the medical nature of criminal problems and upon therapy. The book deals with every branch of the problem and makes excursions into related fields. It is indexed and has a bibliography of 242 items.—L. Balsam (Clark).

5823. Kirkpatrick, C. **Intelligence and the radio.** *Sociol. soc. Res.*, 1935, 19, 203-209.—Limited evidence suggests a relationship between lower occupational and educational status, presumably associated in some degree with lower intelligence, and radio responsiveness.—J. R. Hilgard (Stanford).

5824. Kolosy né Jankovich, L. **A nyelvtani képletnek pedagógia-lélektani jelentősége.** (A grammatical formula.) *Mag. psychol. Szle*, 1934, 7, No. 3/4, 74-88.—A grammatical formula is proposed in an attempt to minimize one of the difficulties of learning foreign languages. It consists of a schematic presentation of the sentence structure. Different types of words are represented by different signs. The parts of a sentence are replaced by boxed spaces containing the above signs. Word order is indicated by digits or arrows, while colors show the connection between individual parts of the sentence. This system reduces complicated structures to a limited number of basic forms and, instead of using the imitation technique, considers language instruction as a special case of memory work. By means of summation individual words and their connections are combined into general concepts of word combinations. Impressions which are similar, yet should be retained individually, are distinguished by means of visual characteristics, which prevents confusion. Conscious application of rules seeks to avoid needless repetition. The author emphasizes the similarity of the proposed method with that used in teaching mathematics.—H. Beaumont (Kentucky).

5825. Krüger, O. F. **Der Typ eines Unverbesserlichen.** (A typical incorrigible delinquent.) *Krim. Mh.*, 1935, 9, 156-157.—An account of the career of a young man whose delinquencies began at fifteen years and consisted in the theft of all sorts of articles, ranging from gloves to autos. He moved from place to place in Germany and Holland, assuming various disguises, and probation, suspended sentences and

commitments to correctional institutions affected him not at all. The only effective method of dealing with such cases is permanent custody.—*M. E. Morse* (Baltimore).

5826. Kuczynski, R. R. Population: history and statistics. *Encycl. soc. Sci.*, 1934, 12, 240-248.—*L. A. Riggs* (Clark).

5827. Lasswell, H. D. Propaganda. *Encycl. soc. Sci.*, 1934, 12, 521-528.—Methods of political and industrial propaganda are discussed under the general theme of mass control.—*L. A. Riggs* (Clark).

5828. Lasswell, H. D. The psychology of Hitlerism. *Polit. Quart.*, 1933, 4, 373-384.—Hitlerism is the reaction of a desperate lower middle class against the growing power and prestige of the unionized worker and the upper bourgeoisie. The psychological insecurities of this lower middle class make necessary "new objects of devotion and new targets of aggression." Desiring to discharge animosity against the rich but not to be identified with the manual workers, this group finds the Jew a fitting scapegoat for a common hatred. Moreover, the intellectually superior and commercially successful Jew serves as the "sacrificial ram" to expiate the guilt which the temptations of war, unemployment and undernourishment occasioned. The "awakening of Germany is a cleansing gesture for moral worth." In it Hitler plays the maternal role, preoccupied with the physical, intellectual and ethical development of his "children." Emphasizing the need for purity of racial stock, "abstinence from wine, women, and excess," he offers himself as the hero to redirect the introverted impulses of his family onto the scapegoat and the foreign enemies and to bring to life a new Germany, self-respectful and unified.—*R. E. Nelson* (Chicago).

5829. Lazarte, J. El torno a una interpretación sexualista de la historia. (The revolution in a sexualistic interpretation of history.) *Arch. argent. Psicol. norm. pat.*, 1935, 2, 27-30.—Sex is considered as the prime factor in social progress. Historical fact for the past two centuries has been interpreted from the materialistic and politico-economic point of departure. The author decries this view and would stress sex as a social phenomenon, and as such it is important in historical interpretation.—*R. M. Bellows* (Ohio State).

5830. Leon, P. Artistic form and the unconscious. *Mind*, 1935, 44, 347-349.—A reply to E. Jones' defence of the psychoanalytic theory of the part played by the unconscious in artistic creation.—*H. Helson* (Bryn Mawr).

5831. Ligon, E. M. Developing the Christian personality. Albany: Westminster Presbyterian Church, 1935. \$10.—The author has prepared a developmental chart, outlining a program of personality development in terms of the Christian religion. The psychological characteristics of the five principal stages of child development, from infancy to early adolescence, are briefly described. The Christian personality is described as consisting of eight traits, as described in the author's book *The Psychology of Christian Personality*. Suggestions are made for the

development of each of these traits in each of the five developmental stages, using in each case the psychological characteristics of the age.—*E. M. Ligon* (Union).

5832. Lima, A., & De Castro, O. Teria sido o delicto praticado em estado de inconsciencia? (Could the crime have been committed in a state of subconsciousness?) *Rev. Neurol. Psychiat. S. Paulo*, 1934, 1, 61-65.—The plea of subconsciousness was ruled out of this case partially as a result of the fact that the Jung-Bleuler test indicated deception.—*R. M. Bellows* (Ohio State).

5833. Lindworsky, J. Psychologie der Aszese. Winke für eine psychologisch richtige Aszese. (The psychology of asceticism. Hints for its psychologically correct practice.) Freiburg: Herder, 1935. Pp. 95.—Applied psychology for priests and other members of Catholic orders. Lindworsky discusses the circumstances and legitimate aims of these groups, the avoidance of failures, and attainment of the highest efficiency. The viewpoint is that of totality and the psychology of the will. The exposition is based on the author's own experience and the records of his pupils.—*J. Lindworsky* (Prague).

5834. Lundberg, G. A. [Ed.] Current research projects. *Amer. J. Sociol.*, 1935, 41, 218-235.—The results of the 1935 census of social research conducted by the American Sociological Society are given, including names of authors, titles, and short descriptions of the projects. The main classes of study are as follows: human nature and personality, the family, peoples and cultural groups, social organization and social institutions, population and territorial groups, the rural community, collective behavior, conflict and accommodation groups, social problems, social pathology and social adjustments, methods of research, and sociological theory and history.—*A. B. Hunter* (Clark).

5835. May, G. Prostitution. *Encycl. soc. Sci.*, 1934, 12, 553-559.—*L. A. Riggs* (Clark).

5836. Mead, M. Tabu. *Encycl. soc. Sci.*, 1934, 14, 502-505.—*L. A. Riggs* (Clark).

5837. Meltzer, H. Talkativeness in stuttering and non-stuttering children. *J. genet. Psychol.*, 1935, 46, 371-390.—Amount of talkativeness was measured in terms of the number of words used in responding to the ten ink blots of the Rorschach test, and rate in terms of words given in the time taken; while the nature of the talkativeness was analyzed by comparing stutterers and non-stutterers as to Rorschach personality factors, correlations of these with talkativeness scores, and correlations of talkativeness with certain psychological, social, and educational factors. The stutterers were distinctly more talkative, but did not differ significantly in rate from the non-stutterers. Their responses showed more productivity, more qualifying phrases, more non-content responses, more whole responses vaguely perceived, more introversion, more extativeness, less direct responses, less sharply perceived forms, less effective adaptability. Suggestions for further study are offered.—*J. F. Dashiell* (North Carolina).

5838. Meshchaninov, I. I. *Osnovnye lingvisticheskie elementy.* (The fundamentals of linguistics.) *Yazyk i Myshlenie*, 1934, 2, 7-31.—Since the moment when speech entered into the developmental history of mankind it has been a means of social intercourse. The primitive scream, as a part of gestural language, already held a social function at the dawn of human society. This diffuse, inarticulate scream became divided later into tones, the oral and nasal being evolved first, then tongue and teeth sounds, etc. The whole diversity of the phenomena of the history of speech may be traced back to four original fundamental elements (*sal, ber, yon, rosh*) which naturally have been augmented by their intermixture. Semantics is based from the beginning on the process of speech construction.—E. Kagarov (Leningrad).

5839. Negus, V. E. *The mechanism of phonation.* *Acta otolaryng.*, Stockh., 1935, 22, 393-419.—Twelve figures are given showing the larynx of man and various animals. Sound is not normally produced by stretching of the vocal cords, nor is rise of pitch due to increased stretching. Phonation is due rather to a synergic action of certain fibers of the sphincteric group, aided by fibers of the dilator muscles which close the glottis and give elasticity to its margins. Excessive closure is prevented by contraction of the crico-thyreoideus and crico-arytenoideus posticus. Variations of tone are determined by the degree of contraction of the thyro-arytenoideus. The length of the vocal cords affects the rate of vibration, while their shape influences the quality of the voice. If they are massive and rounded as in oxen, the voice is mellow. If they are sharp edged as in lemurs, the voice is shrill. The pharynx, nose, and mouth are important resonators, which help produce the overtones. The mobile tongue, lips, and buccal cavity in man also aid in his superiority in phonation over other animals.—M. B. Mitchell (New Hampshire State Hospital).

5840. Niceforo, A. *Frammenti di una introduzione allo studio della sociologia.* I. (Fragments of an introduction to the study of sociology. I.) *Riv. Psicol. norm. patol.*, 1935, 31, 80-103.—There is first an outline of various methods of presenting an introduction to the study of sociology. Second, the author gives his own method, which consists of showing what are the constant and the variable factors in the structure and functioning of human society.—T. M. Abel (Sarah Lawrence).

5841. Nielka, M. *Speech difficulties in childhood.* *Brit. J. med. Psychol.*, 1935, 15, 127-139.—Disorders of speech may be due to malformations of structure (congenital or acquired), and disorders of function, partly or wholly psychogenic. Two cases are presented in detail, one of alalia in which the emotional disturbance was prominent, another in which the defects were organic. "In framing the outlines of our therapy, we have to consider the nature of the factors which disturb the speech impulse as well as those which distort its execution."—E. R. Hilgard (Stanford).

5842. Pear, T. H. *Mental imagery and style in writing.* *Univ. Toronto Quart.*, 1935, 4, 453-467.—

The author believes that individuals with different kinds of imagery have different styles of writing. He believes that "visualizers" should be used for script for radio, talkies, etc., since their style of writing is better suited for such work than that of imageless thinkers.—F. J. Gaudet (Dana).

5843. Pfleigler, M. *Die Psychologie der religiösen Bildung.* (The psychology of religious development.) Innsbruck, Munich: Tyrolia, 1935. Pp. 295. RM. 5.30.—R. R. Willoughby (Clark).

5844. Pickford, R. W. *Some mental functions illustrated by an experiment on reading.* *Brit. J. Psychol.*, 1935, 25, 417-435; 26, 49-58.—Reports of 18 subjects on their impressions in reading twelve shorter and nine longer extracts of prose and poetry were used as the basis for a study of mental functions in reading. Attitudes, rhythm and attention were found to be very important; they were called directive tendencies, and usually functioned in assisting understanding. Feelings and emotions indicated whether parts of the reading matter could be grasped readily or with difficulty, or whether the subject's mind was in a conflicting or a harmonious state, or underlaid defensive processes when passages were found to be intolerable. Imagery sometimes obstructed reading, but more often acted as a basis for meaning. Critical tendencies and the functions of words themselves also played an important part in the construction of meaning.—M. D. Vernon (Cambridge, England).

5845. Prasad, J. *The psychology of rumour: a study relating to the great Indian earthquake of 1934.* *Brit. J. Psychol.*, 1935, 26, 1-15.—Describes the rumors which arose during the Indian earthquake of Jan. 15th, 1934. It was found that the rumors were a group response to a highly emotional situation affecting the interests of a whole group of people, and were due also to the unknown and unverifiable aspects of the situation. Since the rumors arose in a group situation, their characteristics were in part determined by the mentality of the group and in part by the social tendencies to comradeship and suggestion.—M. D. Vernon (Cambridge, England).

5846. Pribram, K. *Unemployment.* *Encycl. Soc. Sci.*, 1935, 15, 147-162.—A brief analysis of the causes and consequences of unemployment, together with statistics on unemployment in many countries during the past decade.—L. A. Riggs (Clark).

5847. Racine, A. *Les enfants traduits en justice.* (Indicted children.) Liège: Inst. Sociol. Univ. Bruxelles, 1935. Pp. 470.—In the first part of the book, the author presents the law of May 15, 1912, creating a special court for delinquent children. The functioning of the court is examined in the light of 300 cases (163 boys, 137 girls). In the second part, the author reviews the different forms of delinquency and misconduct envisaged by the law. The third part of the book concerns the physical and moral influences which have been factors in the delinquency: number of children, living conditions, economic and professional status of the parents, alcoholism and delinquency of the parents, siblings, physical and mental status of the family, school attendance, and the use of leisure. The fourth part deals with conclusions and

suggestions, notably that the work of the tribunals should be extended to include preventive measures. An appendix contains the text of the 1912 law, the program for medical and psycho-pedagogical observation, and the program of studies of the school for social service.—*R. Nihard* (Liège).

5848. **Rocha, R., & Silva, R.** *Contribución al estudio de la simulación.* (Contribution to the study of simulation.) *Arch. argent. Psicol. norm. pat.*, 1935, 2, 5-11.—The study deals with identification of simulation as stereotyped escape behavior—a species of apparent mental blockade in stereotyped form which the subject, accused of crime, assumes for the purpose of shielding his normal mental condition. Three illustrative case studies are briefly outlined. Simulation is easily differentiated from the symptoms of true neurosis, since it is opportune to the occasion, is atypical, and is modifiable.—*R. M. Bellows* (Ohio State).

5849. **Rubinow, I. M.** *Old age.* *Encycl. soc. Sci.*, 1933, 11, 452-462.—After mentioning the physical and psychological characteristics of the aged, the author discusses their status in society, with especial reference to retirement programs.—*L. A. Riggs* (Clark).

5850. **Sahai, M.** *Sociability.* *Indian J. Psychol.*, 1934, 9, No. 3-4, 68-71.—On the basis of estimates of 20 traits for each of 200 subjects, an attempt is made to show which traits are related to sociability. Factor analysis is used extensively.—*H. Schlosberg* (Brown).

5851. **Sander, F.** *Seelische Struktur und Sprache.* (Personality structure and language.) *Neue psychol. Stud.*, 1934, 12, Heft 2, 59-68.—The author attempts to show how an early imposition of a foreign language on the mother tongue leads to a conflict of two different attitudes and thus interferes with the formation of a stable personality structure. In bilingual children not only the integrity of language suffers, but the general intellectual development is influenced unfavorably, and there is a general loss of harmony in feeling and expression. Moreover, the early experience of relativity impedes the formation of a stable moral character.—*E. Hanfmann* (Worcester State Hospital).

5852. **Schapiro, M.** *Taste.* *Encycl. soc. Sci.*, 1934, 14, 523-525.—Just as the sense of taste is concerned with an absolute admission or rejection of food, so the concept of taste in art and social behavior may be analyzed as an individual choice reaction.—*L. A. Riggs* (Clark).

5853. **Schramm, W. L.** *The melodies of verse.* *Science*, 1935, 82, 61-62.—Poetic melodies have been found to arrange themselves in patterns and cadential effects at the end of a passage. Further phonophotographic researches show that rhyming words tend to be pronounced at the same pitch.—*R. Goldman* (Clark).

5854. **Sellin, T.** *Race prejudice in the administration of justice.* *Amer. J. Sociol.*, 1935, 41, 212-217.—It would be denying to the judge the ordinary attributes of human nature to assume that he could render justice free from all preconceptions. The marked

influence of race and nationality prejudice in the administration of justice is revealed through a study of the average length of sentences, definite and indeterminate, of foreign-born, negro, and white male prisoners received from courts in 1931 and committed to state and federal prisons and reformatories for adults in the United States. The great and relatively constant variations observed must be largely attributed to the human equation in judicial administration and as evidence that equality before the law is a social fiction.—(Courtesy *Amer. J. Sociol.*)

5855. **Smith, E. S.** *A study of twenty-five adolescent unmarried mothers in New York City.* New York: Salvation Army Women's Home & Hosp., 1935. Pp. ii + 97. \$2.00.—The purpose of this study has been to ascertain what factors in the individual cases were responsible for the unconventional behavior of the girls. A special school was organized for these unmarried mothers which enabled the investigator to collect the desired data through discussions, class exercises, and informal interviews, as well as to aid the students to prepare for the future through discussions on child psychology, etc. Comparable questionnaires were given to 100 Girl Reserves, and comparisons between the two groups are made in regard to types of homes, companions, recreations, self-evaluations, etc. Both groups were disappointed in the negligence of the school in preparing them for life by failing to give them sex information, information regarding social contacts with the opposite sex, etc. The duty of the schools in this respect is stressed. The literature on unmarried motherhood is reviewed. The questionnaires and lists of exercises used are appended.—*R. Goldman* (Clark).

5856. **Stone, H. M., & Stone, A.** *A marriage manual.* New York: Simon & Schuster, 1935. Pp. xi + 334. \$2.50.—A treatise from the didactic and medical viewpoints, printed in the form of an interview between a physician and a couple about to be married.—*R. R. Willoughby* (Clark).

5857. **Takano, K.** *Ongaku shinrigaku.* (Psychology of music.) Tokyo: Toen Shobo, 1935. Pp. 440. Y 4.50.—Part I. Psychophysics of the traditional psychology of sound as a part of the psychology of music. Part II. Structure of tonality, which constitutes the basis of the musical scale. Part III. Psychology of music proper, in which creation of music, musical works, appreciation of music and types of recitals, along with formal and material analysis of music, are discussed.—*R. Kuroda* (Keijo).

5858. **Thouless, R. H.** *The tendency to certainty in religious belief.* *Brit. J. Psychol.*, 1935, 26, 16-31.—An enquiry into the degrees of conviction with which subjects believe or disbelieve religious propositions shows the presence of a preference for high degrees of conviction which may be called a "tendency to certainty," i.e., the majority of subjects either strongly believe or disbelieve, and relatively few are doubtful. This tendency is present also in non-religious beliefs of a relatively neutral affective significance, although probably less strongly than in

religious beliefs. It is no less strong among unbelievers than among believers. It is little or not at all correlated with intelligence, and is no stronger in one sex than in the other.—*M. D. Vernon* (Cambridge, England).

5859. Tolmie, J. R. An analysis of the vibrato from the viewpoint of frequency and amplitude modulation. *J. acoust. Soc. Amer.*, 1935, 7, 29-36.—“The pitch vibrato is considered both as a continuously variable or warbling tone and as a spectral distribution of closely adjacent unvarying side tones. The synthesis of these views is then expressed in the symbolism of revolving vectors, thereby disclosing in detail many of the underlying features of tonal blending. Superimposed intensity variations are also considered, and the effect of phase displacements between the two types of modulation determined. Following this are a few closing remarks which it is hoped may serve to direct attention to the application of the vibrato, or of vibrato-like effects, to electrical musical devices.”—*S. S. Stevens* (Harvard).

5860. Unwin, J. D., Flugel, J. C., & Money-Kyrle, R. A discussion on sexual regulations and cultural behaviour. *Brit. J. med. Psychol.*, 1935, 15, 153-163.—Unwin's paper, an abstract of his *Sex and Culture* (1934), suggests that civilization has been built by sacrifices in the gratification of innate sexual desires. Primitive zoistic (magical) societies, allow free pre-nuptial opportunities for sexual gratification to their women. Manistic societies inflict occasional or irregular continence. Deistic societies (the most complexly organized) insist on complete pre-nuptial continence. Flugel points out that sex according to Freud is more complicated than the impulses connected with the genital organs, and the study is therefore not a complete verification of the Freudian doctrine of sublimation. The development of religion, furthermore, is not necessarily the best evidence of the progress of civilization, which might also be studied in terms of material culture. Suggestions for further research are given. Money-Kyrle indicates that the correlation found by Unwin between sexual abstinence and social energy may be a collateral effect of some other cause, such as infantile traumata.—*E. R. Hilgard* (Stanford).

5861. Visser, H. L. A. Humor's weldaad. (Humor's benefits.) *Menschen Maatsch.*, 1935, 11, 1-16.—*R. R. Willoughby* (Clark).

5862. Voelker, C. H. The visualization treatment of spasmophobia. *Med. Rec.*, N. Y., 1935, 142, 272.—In treating a stammerer by the visualization technique it was found that the words *fear* and *terror* occasioned complete blocking. Likewise synonyms of those words with the visualization technique caused stammering. Similar results were obtained on 8 other subjects. The author raises the question of the relationship between fear and stammering and the frequency of this finding in the use of the visualization technique.—*M. H. Erickson* (Eloise Hospital).

5863. Vold, G. B. Prediction methods applied to problems of classification within institutions. *J. crim. Law Criminol.*, 1935, 26, 202-209.—The

methods of Burgess, the Gluecks, Vold, Tibbets, Monachesi and others for predicting the success on parole or probation of prisoners are discussed, together with some empirical results in predicting the conduct of prisoners within an institution.—*L. Ackerson* (Institute for Juvenile Research).

5864. Werner, R. Neue Ursachenerkenntnisse und Erfolgsmöglichkeiten in der Verhütung und Heilung des Stotterns. (New etiological knowledge and consequent possibilities for the prevention and cure of stuttering.) Halle (Saale): Akad. Verl., 1934. Pp. 63. RM. 4.80.—*R. R. Willoughby* (Clark).

5865. Wieman, H. N., & Westcott-Wieman, R. Normative psychology of religion. New York: Crowell, 1935. Pp. 564. \$3.50.—“Normative pertains to the fulfilling of function” for the authors, and specifically to fulfilling the function of religion as they define it. Religion is “devotion to what one holds to be supremely worthwhile for all human living.” The norms, which recur in various practical relations, are: worthwhileness of the objective, completeness of loyalty, efficiency of loyalty, sensitivity of loyalty, progression of loyalties, social effectiveness of loyalty. The book is an exposition of the development and application of these norms in a variety of philosophical and educational connections. Social reconstruction under these auspices is held to be the goal of religion.—*H. D. Spoerl* (Northeastern).

5866. Wolfe, A. B. Population: theory. *Encycl. soc. Sci.*, 1934, 12, 248-254.—*L. A. Riggs* (Clark).

5867. Zilborg, G. The medical man and the witch during the renaissance. Baltimore: Johns Hopkins Press, 1935. Pp. 215. \$2.50.—Three lectures describe and evaluate early conditions in the field of psychiatry and medical psychology. The first lecture considers the physiological and psychological aspects of the *Malleus Maleficarum* (Witch's Hammer) by Kraemer and Sprenger (1487-89), a textbook for the Inquisition. The second lecture discusses the witch and medicine in the 16th century, including comments on Paracelsus and Agrippa. The third lecture is devoted to the founder of modern psychiatry, Johann Weyer (1515-1588) whose work, *De praestigiis daemonum* (1563), emphasized the clinical point of view, the necessity of treating witches as medical cases, the view that will has nothing to do with mental sickness, and that normal and pathological states differ only in degree.—*W. S. Hunter* (Clark).

[See also abstracts 5440, 5517, 5659, 5667, 5668, 5682, 5683, 5685, 5689, 5697, 5725, 5730, 5731, 5734, 5750, 5751, 5761, 5763, 5786, 5788, 5883, 5911, 5912, 5931, 5944, 5951, 5953, 5976, 5994, 6012, 6016, 6020, 6022, 6026, 6031, 6037, 6040, 6048, 6056.]

#### INDUSTRIAL AND PERSONNEL PROBLEMS

5868. [Anon.] Etudes concernant l'influence que le bruit exerce sur le rendement du travail. (Studies of the effect of noise upon production.) *Protection*, 6, 112-115.—Summary of studies in the United

States, Germany, Austria, England and France dealing with the nature of noises and their frequency.—*H. E. Burt* (Ohio State).

5869. "Apprentice." Too much drudgery. *Hum. Factor, Lond.*, 1935, 9, 109-114.—The increasing mechanization of printing has so far had little effect on the apprentice, who is still forced to spend the first year or two of his apprenticeship in tedious and unnecessary hand labor. The author argues that the seven-year apprenticeship system which still prevails in Great Britain is an anachronism, and that with an improved training scheme a four-year term would be more than sufficient.—*M. Horsey* (National Institute for Industrial Psychology).

5870. Banerjee, M. N. Applied psychology. *Indian J. Psychol.*, 1934, 9, No. 1-2, 1-17.—During the last 20 years modern psychology has been making steady progress in India. However, in comparison to America, Europe, and Japan, India is quite deficient in vocational guidance and selection, and in industrial psychology. Some beginnings have been made along these lines, but in view of their importance, it is suggested that all efforts be coordinated in an institute of applied psychology.—*H. Schlosberg* (Brown).

5871. Banerjee, M. N. Investigations in industrial psychology. *Indian J. Psychol.*, 1934, 9, No. 3-4, 49-56.—Preliminary studies made at a steel plant and at a chemical works are described as a sample of how one should make surveys before suggesting changes that will lead to more efficient working conditions. Some of the findings are presented.—*H. Schlosberg* (Brown).

5872. Bena, E. Pomer psychotechniky a lekarstvi. (Psychotechnical measurement and medicine.) *Rev. Neurol. Psychiat., Praha*, 1935, 32, 56-59.—Second and last part of an article (see IX: 4759) reviewing techniques for measurement in all branches of applied psychology. Drawing attention to the great variety of tests, the author concludes that the most reliable tests are the intelligence tests used to predict success in schools. The second most valuable are tests for vocational selection.—*Z. Piotrowski* (Columbia).

5873. Benson, I. Attention problems in the judging of newspaper literary competitions. *Hum. Factor, Lond.*, 1935, 9, 259-267.—The adjudication of so-called "literary competitions" run by popular newspapers in Great Britain provides an interesting example of concentrated intellectual work done under precise metrical control. It is suggested that the work would provide a valuable field of study for the psychologist, since the effect of disturbing influences is immediate and measurable. Study of the work shows how great is the reduction in efficiency produced by emotional disturbances—in particular by any weakening of the worker's sense of security.—*M. Horsey* (National Institute for Industrial Psychology).

5874. Bergmann, C. Charakterartung und Volksbibliothekarischer Beruf. (Types of character and the vocation of public librarian.) *Z. pädag. Psychol.*, 1933, 34, 411-416.—*R. R. Willoughby* (Clark).

5875. Biegel, R. A., & De Vries, M. J. Une installation pour la sélection des chauffeurs aux Pays-Bas. (An installation for selecting drivers in the Netherlands.) *Travail hum.*, 1935, 3, 139-152.—Many of the tests are similar to those used by Lahy at Paris for a similar purpose. The subject reacts with buttons and foot pedals to combinations of colored lights. Toy cars move toward each other at different speeds and the subject estimates where they will meet. Suggestibility is measured by a crank which the subject operates and the examiner may or may not operate simultaneously. A chronoscope and dynamometer are used in conventional fashion. The subject operates standard automobile controls while viewing a film taken from the front of a car. The accelerator governs the speed of the projector and the controls record on a tape. Eight rubber tubes are interlaced in a complex pattern. Each has a bulb on one end and a candle near the other. One candle is lighted and the subject must squeeze the right bulb to extinguish it. Words are read aloud as flashed on a screen while an automobile headlight is flashed intermittently in the subject's eyes. No results are given.—*H. E. Burt* (Ohio State).

5876. Borden, N. H., & Lovekin, O. S. A test of the consumer jury method of ranking advertisements. *Publ. Grad. Sch. Bus. Adm. Harv. Univ.*, 1935, 22, No. 2. Pp. iv + 61. \$1.00.—Each of 17 series of advertisements was submitted to from 60 to 120 individuals to be ranked on the basis of two questions: (1) "If you were turning the pages of a magazine, which of these advertisements would be most likely to attract your attention?" (2) "Suppose you were going to reply to the offer, which one of these advertisements would be most likely to influence you to do so?" A comparison between the rankings of these advertisements by the consumer juries and their actual effectiveness in terms of sales or inquiries led to the following conclusions: (1) The consumer opinion method can be depended upon to give correct rankings of effectiveness of advertisements, if properly conducted. (2) A dependable ranking of advertisements carrying differing appeals requires the use of an audience which is really interested in the product advertised. (3) The method should not be applied to products other than those having fairly general use or interest, unless an effective and economical way of reaching a jury really interested in the product can be devised. (4) If the differences in the advertisements relate not to differences of appeal but to such variables as illustration, arrangement of mass, type, and spacing, then dependable results in ranking probably can be secured whether the jury is actively interested in the product or not.—*B. Casper* (New York City).

5877. Dodge, A. F. Occupational ability patterns. *Teach. Coll. Contrib. Educ.*, 1935, No. 658. Pp. v + 97.—Clients (651) of the Adjustment Service (New York City) are divided into 13 occupational groups (about 50 individuals per group). Inter-group comparisons of test records are made. The following tests are used: Pressey Senior Classification, O'Connor

Vocabulary, Minnesota Vocational Test for Clerical Workers (2 scores) and Bernreuter Personality Inventory (3 scores). Significant differences in means are reported, but large variability causes the groups to overlap considerably. The bibliography lists 48 titles.—*J. M. Stalnaker* (Chicago).

5878. Eliasberg, W. *Di alcune ripercussioni della vita economica sulla psicopatologia umana.* (Some repercussions of economic life on human psychopathology.) *Arch. gen. Neurol. Psichiat.*, 1934, 15, 124-131.—The crux of the problem lies in motivation. Psychotechnics alone is insufficient and should collaborate with psychopathology and medicine.—*H. E. Burtt* (Ohio State).

5879. Eyre, A. B. B., Lester, A. M., & Mitchell, J. H. *An investigation in an assembly shop.* *Hum. Factor, Lond.*, 1935, 9, 268-273.—Improvements in methods and distribution of work, in bench arrangement, seating, lighting and the design of various small tools led to a marked reduction in fatigue and an increase of 40% in output.—*M. Horsey* (National Institute for Industrial Psychology).

5880. Fountain, H. A., & Wilkinson, M. E. T. *Working conditions in a tin shop.* *Hum. Factor, Lond.*, 1935, 9, 147-149.—Alterations of lay-out, improved seating, the introduction of rest pauses, and protection from radiant heat increased the output of two solderers under experimental conditions by over 40%.—*M. Horsey* (National Institute for Industrial Psychology).

5881. Gatti, A. *Prima relazione sulla efficienza lavorativa dei disoccupati. Categoria: metallurgici.* (First report on the working efficiency of the unemployed. Metallurgical class.) *Arch. ital. Psicol.*, 1935, 13, 67-91.—In this article the author expounds the results obtained from an investigation into the working efficiency of a group of unemployed metallurgical workers. The group consisted of 398 workers. The results prove that there is a section of permanently unemployed who are totally or partially unable to find work for various reasons, among which predominates the disability caused by premature senility. The author reports the statistical data pertaining to the percentages by age of the workers examined, either normal or disabled. The data prove that of the total number about 10% consists of disabled, whose number increases in geometric proportion with their ages.—*R. E. Schwarz* (V. A. Facility, Northampton, Mass.)

5882. Hawkins, L. S., Schneidler, G., & White, H. A. *Community agency relationships of the adjustment service.* New York: Amer. Ass. Adult Educ., 1935. Pp. 80. \$50.—*R. R. Willoughby* (Clark).

5883. Katin, L. *Music at work.* *Hum. Factor, Lond.*, 1935, 9, 277-280.—Spontaneous whistling or singing is a natural accompaniment to many forms of rhythmical work, and the author urges that this activity should not be checked unless it is absolutely necessary. Gramophone or wireless music may be a substitute for spontaneous singing.—*M. Horsey* (National Institute for Industrial Psychology).

5884. Katz, D. *Some problems of human feeding in relation to industrial psychology.* *Hum. Factor, Lond.*, 1935, 9, 127-137.—National food habits and preferences may exert far-reaching results; it is largely the extremely cheap and simple diet of the Japanese, for example, that makes them such formidable competitors in industry. Food preferences are determined largely by climate and agricultural conditions, but they are also affected by tradition, religious tabus and the subconscious. In Great Britain there are still differences in food habits in different localities and among different social classes, but these are becoming less marked with the development of mass production and improved methods of preservation and transport. The author finds evidence of a connection between food preferences and physical type—children of the pyknic type preferring a meat diet, while children of the asthenic type incline to vegetarianism.—*M. Horsey* (National Institute for Industrial Psychology).

5885. Kenworthy, W. *First years at work.* *Hum. Factor, Lond.*, 1935, 9, 321-329.—The author, a working man, describes his own experiences in his first job, and points out that the ambition and eagerness with which most lads start their working life are too often rapidly destroyed by unintelligent handling. He makes various suggestions regarding the treatment of lads in industry. In particular, it is important that they should be encouraged to feel a sense of personal responsibility for even minor tasks.—*M. Horsey* (National Institute for Industrial Psychology).

5886. Kogan, C. J. [Improvement of the schedule of workers sharpening shovels.] *Hyg. Sécur. Trav.*, 1933, 3, 45-51.—A schedule of rest pauses was devised on the basis of pulse, respiration, dynamometer and ergograph; production increased.—*H. E. Burtt* (Ohio State).

5887. Kotoseff, —, Stoyanovsky, —, & Steinbuch, —. [Psychogram of workers with the electrical machinery of a coal mine.] *Sovetsk. Psichotekh.*, 1933, 6, 364-368.—The job requires good twilight vision, localization of sound, olfactory and thermal sensitivity, physical endurance, and average intelligence. Methods of instruction are suggested.—*H. E. Burtt* (Ohio State).

5888. Macrae, A. *The case of John Jones. I, II.* *Hum. Factor, Lond.*, 1935, 9, 167-179; 207-217.—A detailed description of a hypothetical case of vocational guidance, which gives a clear idea of the methods employed by the National Institute of Industrial Psychology in Great Britain.—*M. Horsey* (National Institute for Industrial Psychology).

5889. Marbe, K. *The psychology of accidents.* *Hum. Factor, Lond.*, 1935, 9, 100-104.—Statistical analysis of the records of army officers and school children confirm the existence and importance of individual accident-proneness. Two simple tests are described which successfully differentiated accident-prone from non-accident-prone school children. It is emphasized, however, that such tests cannot be universally applied in industry, as the qualities making

for accident-proneness in any occupation depend in part on the nature of the occupation.—*M. Horsey* (National Institute for Industrial Psychology).

5890. **Mitchell, J. H.** A note on lighting for inspection. *Hum. Factor, Lond.*, 1935, 9, 201-203.—Inspection of sheets of gummed paper for flaws was greatly facilitated by an improved lighting fixture which gave a uniform high light over the whole surface of the page.—*M. Horsey* (National Institute for Industrial Psychology).

5891. **Mitchell, J. H.** Subjective standards in inspection for appearance. *Hum. Factor, Lond.*, 1935, 9, 235-239.—A discussion of the difficulties involved in inspection for appearance, where no objective standards are possible. Suggestions are made for reducing these difficulties by the provision of "samples" of various types of defect, and by improved methods of selecting inspectors.—*M. Horsey* (National Institute for Industrial Psychology).

5892. **Moore, H., & Stein, J.** Analyzing the individual. *Hum. Factor, Lond.*, 1935, 9, 94-99.—A contrast between the "atomistic" and the "clinical" methods of vocational guidance, as employed respectively in the U. S. A. and Great Britain. In the "atomistic" method reliance is placed entirely on test results expressed in quantitative terms. In the "clinical" method the interview is as important as the test results, and the isolation and measurement of abilities are regarded only as a methodological convenience, the ultimate aim being the interpretation of test results to give a picture of the total personality.—*M. Horsey* (National Institute for Industrial Psychology).

5893. **Mühl-Kühner, R.** Analyse und Prüfung der Tätigkeit des Melders. (Analysis and testing of the efficiency of the army courier.) Würzburg: Werkbunddruckerei, 1935. Pp. 41.—Little has been contributed in the scientific study of adaptability to military duties. Meyer of Leipzig has published studies of value. Some problems arose during the World War. The author makes a study of the adaptability of foot-couriers to their duties. He emphasizes the physical characteristics that are desirable, bodily endurance and sense-organ sensitivity. He makes a scientific study through testing of the mental characteristics which seem needed for success: memory for logical relationship, visualizing power, and integrating ability. He describes nine tests devised by himself, explains their use, and presents his findings in tables and correlations. He summarizes those abilities which are needed in addition to those of the regular soldier and shows that testing is a suitable means for the discovery of such abilities.—*A. B. Herrig* (Michigan Central State Teachers College).

5894. **Novikoff, V.** [The problem of imitating actual working conditions in an employment test.] Moscow: 1933. Pp. 66.—The apparatus imitated part of a locomotive. Results indicate that it is not necessary to reproduce the actual situation of the job. With some subjects it made no difference and with others the effect was actually unfavorable,

because some of the signals used in the apparatus were slightly different from those used in practice.—*H. E. Burtt* (Ohio State).

5895. **Oakley, C. A.** A new form-board. *Hum. Factor, Lond.*, 1935, 9, 105-108.—A description of a new form-board for use in the selection of engineering apprentices. No norms or correlations are yet available.—*M. Horsey* (National Institute for Industrial Psychology).

5896. **Rachemann, —.** [Selection of workers in copper foundries.] Sovetsk. Psichotekh., 1933, 6, 258 ff.—Tests include coordination, regularity and precision in striking with a hammer, and judgment of distances. The relation between tests and performance on the job for 36 apprentices showed "71% agreement."—*H. E. Burtt* (Ohio State).

5897. **Ramsay, J.** Conveyor packing in a chocolate factory. *Hum. Factor, Lond.*, 1935, 9, 274-276.—A reduction of nearly 60% in packing costs was obtained by improved methods of chocolate packing, involving the use of a conveyor band.—*M. Horsey* (National Institute for Industrial Psychology).

5898. **Shellow, S. R. M., & Harmon, G. R.** Conference manual for training foremen. New York: Harper, 1935. Pp. 209. \$2.50.—*R. R. Willoughby* (Clark).

5899. **Spiegel, J. I.** [Education of apprentices in the metal trades.] Sovetsk. Psichotekh., 1933, 6, 206-227.—The following devices are used for training: models of furnaces, practice in discriminating metals and colors, training in observation, watching skilled workers.—*H. E. Burtt* (Ohio State).

5900. **Stott, M. B.** A preliminary experiment in the occupation analysis of secretarial work. *Hum. Factor, Lond.*, 1935, 9, 249-258.—An attempt at occupation analysis of secretarial work for women by means of a postal questionnaire met with many difficulties, owing to the heterogeneous nature of the occupation and the limitations of the questionnaire method. Tentative findings, however, are that satisfied secretarial workers tend to be women of somewhat colorless type, of average intelligence and without strong ambition. Reasons given for entering secretarial work were frequently negative, a typical reply being "because I had no particular bent for anything."—*M. Horsey* (National Institute for Industrial Psychology).

5901. **Strong, E. K.** Predictive value of the vocational interest test. *J. educ. Psychol.*, 1935, 26, 331-349.—A report of a five-year follow-up of graduates of Stanford University on whom measurements of interests and occupational status were obtainable. Although one-half of college seniors change their occupation within 5 years after graduation, there is close agreement between occupational choice at college and interest test scores at that time and 5 years later. The nature of the second occupational choice, in case there is a change, is fairly well indicated by the college interest test, and those who continue in an occupation during the 5 years (1) obtain a higher score in that occupation on the interest test than in

any other occupation, (2) obtain higher scores in it than men entering some other occupation, and (3) obtain higher scores in it than men who change from that occupation to some other. These data are considered as validating evidence on the interest test.—*A. W. Melton* (Missouri).

5902. **Tead, O.** Personnel administration. *Encycl. soc. Sci.*, 1934, 12, 78-80.—*L. A. Riggs* (Clark).

5903. **Vernon, H. M.** The reduction in hours of work. *Hum. Factor, Lond.*, 1935, 9, 218-225.—A discussion of international proposals for the regulation of hours of work, and a defence of the two-shift system.—*M. Horsey* (National Institute for Industrial Psychology).

5904. **Vernon, H. M.** The report of the departmental committee on the two-shift system. *Hum. Factor, Lond.*, 1935, 9, 314-320.—A summary of a British government report on the two-shift system in industry. The report concludes that "the value of the system to industry for a variety of purposes has been clearly established."—*M. Horsey* (National Institute for Industrial Psychology).

5905. **Watson, W. F.** Strikes and the human factor. *Hum. Factor, Lond.*, 1935, 9, 150-157.—A discussion of the psychology of strikes, primarily from the point of view of the worker. The workers' ingrained suspicion of management produces an atmosphere in which the most trivial incidents may lead to friction. Many disputes might be averted by greater tact on the part of management. The industrial psychologist could play an important part in the prevention and settlement of strikes.—*M. Horsey* (National Institute for Industrial Psychology). [See also abstracts 5577, 5596, 5831, 5846, 5906, 5913, 5915, 5949, 5953, 5954, 5955, 5974, 5982, 5994.]

#### EDUCATIONAL PSYCHOLOGY

5906. [Anon.] Vocational guidance in Fife. *Hum. Factor, Lond.*, 1935, 9, 85-93.—A summary of the results of a five-year experiment carried out by the British National Institute of Industrial Psychology in Fife, Scotland. The most important findings relate to (1) the earliest age at which vocational guidance is practicable, and (2) minimum standards of intelligence, etc., for entry into various main groups of occupations. The first question was investigated by testing children at yearly intervals from the age of eleven upwards, and correlating the scores from year to year. Scores in verbal intelligence tests at ages eleven and thirteen gave an average correlation of .88, but scores in performance tests of intelligence, attainments tests in English and arithmetic, and tests of mechanical ability and manual dexterity showed little consistency. Tests of special vocational aptitudes, apparently, will not give reliable results before the age of thirteen. Approximate minimal qualifications have been determined for the occupations of clerical worker, shop assistant, skilled manual worker and domestic servant.—*M. Horsey* (National Institute for Industrial Psychology).

5907. [Anon.] The Institute's evidence on educational guidance and selection before the consultative committee of the Board of Education. *Hum. Factor, Lond.*, 1935, 9, 299-313.—A report presented by the National Institute of Industrial Psychology to the Board of Education on the possible use of psychological tests as adjuncts to the ordinary examination for admission to various types of school.—*M. Horsey* (National Institute for Industrial Psychology).

5908. **Apte, N. G.** Adult education in India. *Indian J. Psychol.*, 1934, 9, No. 1-2, 95-101.—"Education" in India, even up to the degree of M.A., hardly means more than "literacy." The primary teachers are over-burdened; the students spend very little time at school, and do not retain their literacy for long. A more practical education—e.g., in agricultural methods—is urged. Visual aids, such as a portable magic lantern, would be valuable.—*H. Schlosberg* (Brown).

5909. **Avent, J. E.** Beginning teaching. Knoxville, Tenn.: Author, 1935. Pp. xiii + 599. \$2.50.—The first part of this book is devoted to techniques of teaching; the second, to classroom management.—*F. J. Gaudet* (Dana).

5910. **Behn-Eschenburg, G.** Die Erziehung des Kleinkind-Erziehers. (The education of the educator of young children.) *Z. psychoanal. Pädag.*, 1934, 8, 26-32.—*R. R. Willoughby* (Clark).

5911. **Bell, C. C.** An investigation of the attitude of training college students towards the importance of good speech. *Brit. J. educ. Psychol.*, 1935, 5, 139-156.—A questionnaire followed by a checking test and a group of case studies, involving in all 200 students in education at the University of London and 26 teachers with at least two years of teaching experience in secondary schools, shows that the students, while declaring that they notice speech features in others, actually are unreliable in their observations; a large proportion have emotional feelings regarding their own speech, feel superior to those who speak badly, and are usually well satisfied with their own speech on social acceptability standards; there is an expressed desire to have their own faults revealed to them for correction; and good speakers show a higher reliability than bad speakers in their assessment of their own speech.—*K. M. Cowdery* (Stanford).

5912. **Bigelow, M. A.** Sex education and sex ethics. *Encycl. soc. Sci.*, 1934, 14, 8-13.—*L. A. Riggs* (Clark).

5913. **Braddock, A. P.** Critical notice of *The Prediction of Vocational Success*, by E. L. Thorndike. *Brit. J. educ. Psychol.*, 1935, 5, 212-217.—The study is characterized as one demanding continuity of method and tools begun when both were meager. As a result this work has entailed vast labor with good methods so far as the plan allowed, but the conclusions are vitiated by the neglect of human factors. It is probably one of the largest-scale reports on long-range prediction yet published, but instead of becoming the classic on predictability the book is just a record of patient and meticulous labor into

which one has to delve deeply in order to extract the conclusions at which the investigators have arrived.—*K. M. Cowdry* (Stanford).

5914. Breed, F. S. **Spelling.** *Rev. Educ. Res.*, 1935, 5, 83-88.—A review of the literature from January, 1931, to July, 1934, on special methods and the psychology of elementary-school spelling, covering: the selection and gradation of vocabulary; methods of instruction, factors in learning, procedures and devices, the generalization of ability, discussions; the measurement of achievement; deficiencies and diagnosis. Bibliography of 67 titles.—*S. P. Hayes, Jr.* (Mt. Holyoke).

5915. Brewer, J. M. **Vocational guidance.** *En-cycl. Soc. Sci.*, 1935, 15, 276-279.—*L. A. Riggs* (Clark).

5916. Brewer, J. M. **Individual development and guidance—definition and scope.** *Harv. Teach. Rec.*, 1935, 5, 164-171.—Educational institutions cannot indefinitely extend special non-educational services to students, charging all these to the educational budget. Guidance, however, and especially educational guidance, is synonymous with education and may often be done best by the counselor in cooperation with the dean and with numerous other members of the educational institution. It cannot be done as well by other agencies.—*S. P. Hayes, Jr.* (Mt. Holyoke).

5917. Broehl, F. **A reading course for low groups.** *Engl. J.*, 1935, 24, 28-35.—Selecting literature for retarded pupils was found more difficult than planning a composition course for them. The aims were: to inculcate right social attitudes and responsibilities, to develop ideals of character and conduct through vicarious experiences, to increase understanding of the world in which we live and its people, to develop the desire to read for pleasure, and to develop the skills and mechanics of reading. For each specific objective are suggested a text, procedure, and correlated reading. Tests and drills were adapted to the specific needs of these lowest 10% of 800 tenth-grade students.—*S. P. Hayes, Jr.* (Mt. Holyoke).

5918. Brueckner, L. J. **Techniques of diagnosis.** *Yearb. nat. Soc. Stud. Educ.*, 1935, 34, 131-153.—The present-day school has assumed many of the functions and responsibilities previously borne by church and home. In a complex social order the school can neither avoid nor neglect this challenge of leadership. All pupils should share certain basic and common social experiences. Children obviously differ in their potentialities and abilities in all forms of physical, mental and emotional growth, but research is still needed to devise general norms for purposes of comparison. "A comprehensive behavior diagnosis should be descriptive and analytical." In the diagnosis of the exact nature and degree of deficiency in such educational outcomes as attitudes, appreciations and traits, tests are almost completely lacking. Until we know more about the effectiveness of our teaching methods and materials, much of our teaching will be unintelligently directed. In diagnosing the quality of class room work a teacher can (1) observe a pupil at work in ordinary or specially selected situations,

(2) systematically analyze the pupil's written and oral responses, (3) use objective and analytically diagnostic devices, (4) interview any or all of the pupil's social group including pupil and parents, and (5) adopt laboratory methods of investigation.—*P. S. de Q. Cabot* (Harvard).

5919. Burling, T. **Integrating psychiatry with the Winnetka (Illinois) public school system.** *Amer. J. Orthopsychiat.*, 1935, 5, 132-140.—A psychiatrist outlines his role and his work in a closely knit public school system.—*J. McV. Hunt* (Worcester State Hospital).

5920. Buros, O. K. **Educational, psychological, and personality tests of 1933 and 1934.** *Stud. Educ., Rutgers Univ. Bull.*, 1935, 11, No. 7. Pp. 44. \$50.—A classified, indexed bibliography of all commercially available tests published in 1933 and 1934 in English-speaking countries, except those constructed for certain areas, for use with a particular textbook.—*F. J. Gaudet* (Dana).

5921. Buswell, G. T. **The place of the psychological laboratory in educational diagnosis.** *Yearb. nat. soc. Stud. Educ.*, 1935, 34, 155-167.—The value of laboratory techniques lies in the refinement and precision with which casual observations can be confirmed or refuted. Certain types of laboratory diagnoses involve expensive apparatus and trained technicians, but crucial investigations can be carried out easily and effectively. Laboratory diagnoses should supplement but not supplant other forms of diagnosis. Teachers should be aware of the large field of scientific literature referring to laboratory experimentation. The use of kymographic records and motion pictures has given valuable insight into the details of writing and reading skills. The experiments in handwriting aided by laboratory methods of investigation during the decade 1910-1920 have resulted in a new methodology of handwriting. Photographing eye movements during reading aids us in identifying the span and rate of recognition, the number of regressive movements, and the kind and number of fixations. Motion pictures and sound films give us a permanent record of classroom behavior and procedure that enables us to study thoroughly individual characteristics and the degree of concentration and distraction registered by each pupil. Studies of musical talent, the diagnosis of emotional tensions, the reading of music and the various procedures for testing sense defects have been considerably facilitated by the application of laboratory techniques.—*P. S. de Q. Cabot* (Harvard).

5922. Chadwick, M. **Kindheitserlebnisse von Pflegerinnen.** (Childhood experiences of nurses.) *Z. psychoanal. Pädag.*, 1933, 7, Nos. 8/9.—*R. R. Willoughby* (Clark).

5923. Cline, E. C. **Differentiation in English on senior high school level.** *Engl. J.*, 1935, 24, 17-21.—Differentiation of English course of study on basis of future plans, whether college or otherwise, was found more satisfactory than on other bases. Quite different interests of the non-college group dictated a different content for their course, and an elimination of much

study of grammar and formal composition. When segregated, the non-college group displayed much more vehemence in their interests than the college group, and were no longer "pale echoes" of the latter. The college group averaged about 105 in IQ, and the non-college group about 95. However, the range of IQ's was practically the same in both groups.—*S. P. Hayes, Jr.* (Mt. Holyoke).

5924. Clucas, E. Teaching money management, a cooperative need of school and home. *Harv. Teach. Rec.*, 1935, 5, 58-65.—Today a literate nation, we are still financially illiterate. Practice in the handling of small amounts of money in childhood is invaluable as training for adulthood's financial responsibilities. Brookline includes a systematic course in personal money management in the school program. Parents are asked to cooperate in giving their children definite and regular allowances, no matter how small, and the children are allowed to spend them as they please, knowing that they can get no more until it is due them. This involves education of the parents as well, often more difficult. When properly done, the child becomes eventually able to spend wisely his income as an adult.—*S. P. Hayes, Jr.* (Mt. Holyoke).

5925. Committee on Research, National Council Teachers of English. The contributions of research to teaching and curriculum-making in English, January, 1933, through June, 1934. II. Literature and recreational reading. *Engl. J.*, 1935, 24, 363-374.—A review of research in the relationship of individual differences to literature programs, the correlation of English with other subjects, the interests of pupils in reading, both before and during college, and including the influence of the library, the appreciation of literature and methods of teaching literature. Bibliography of 36 titles.—*S. P. Hayes, Jr.* (Mt. Holyoke).

5926. Committee on Research, National Council Teachers of English. The contributions of research to teaching and curriculum-making in English, January, 1933, through June, 1934. III. Reading. *Engl. J.*, 1935, 24, 451-461.—A review of research in remedial and diagnostic teaching of reading, the effect of supervisory programs upon improvement of reading, the relationship of reading ability to school achievement, the testing of reading ability, reversal tendencies and their causes, the relationship of eye movements to reading, the analysis of the reading process at the college level, and the materials and methods used in primary reading. Bibliography of 53 titles.—*S. P. Hayes, Jr.* (Mt. Holyoke).

5927. Dean, L. E. Experiments in the academic education of adolescent deaf. II. *Amer. Ann. Deaf*, 1935, 80, 160-171.—The author presents a second report on the educational progress of two deaf girls aged 16 and 18 years. The report deals with a description of the educational and mental capacities of the subjects and the progress made during a single school year on: (1) a project in arithmetic (computation of fractions); and (2) a project in art.—*C. V. Hudgins* (Clarke School).

5928. Delaria, A. Sull'importanza sociale della ginnastica e specie di quella respiratoria applicata

nell'età infantile. (On the social importance of gymnastics and especially of the respiratory gymnastics applied in the years of childhood.) *Pediatria*, 1934, No. 10, 1228-1247.—A synthetic review.—*G. M. Hirsch* (Rome).

5929. Dewey, J. C. The validity of standardized spelling scales. *Elem. Sch. J.*, 1935, 35, 675-681.—The writer compared the words found in a well-known spelling book with those contained in a "commonly used" (but unnamed) spelling scale. In all grades which it purports to test, the spelling scale employs many words not contained in the speller.—*P. A. Witty* (Northwestern).

5930. Educational Press Association of America. Eleventh Yearbook. Washington, D. C.: Committee on Standards, Educ. Press Ass. Amer., 1935. Pp. 31.—This yearbook contains principally a classified list of educational periodicals and a list of sixty educational books of 1934.—*R. Smith* (Clark).

5931. Evans, G. J. M. Social and psychological aspects of primitive education. London: Golden Vista Press, 1934. Pp. 90.—(Not seen).

5932. Fauville, A. La pédagogie expérimentale. (Experimental pedagogy.) *Etud. class.*, 1934, 3, 64-75.—The author presents the tasks already accomplished by experimental pedagogy: the construction of tests measuring the different aspects of personality; the study of learning; the psychology of children and adolescents; and pedagogical applications.—*R. Nihard* (Liège).

5933. Fisher, M. S. Parent education. *Encycl. soc. Sci.*, 1933, 11, 573-576.—The home is still the most important agency in the rearing of the child; hence the value of training parents in child guidance. The National Council of Parent Education comprises 70 member organizations in this country.—*L. A. Riggs* (Clark).

5934. Forest, I. Preschool education. *Encycl. soc. Sci.*, 1934, 12, 320-324.—*L. A. Riggs* (Clark).

5935. Garrison, S. C. Fine arts. *Rev. educ. Res.*, 1935, 5, 45-47.—A review of the literature from October, 1931, to July, 1934, on special methods and the psychology of elementary-school fine arts. Besides studies of teaching methods and recent trends in teaching aims, studies of the influence of training on art ability are reported. Some studies relating art ability to certain personality traits have appeared. Bibliography of 63 titles.—*S. P. Hayes, Jr.* (Mt. Holyoke).

5936. Gates, A. I. A reading vocabulary for the primary grades. (Rev. ed.) New York: Teachers Coll., Columbia Univ., 1935. Pp. 29. \$35.—*R. R. Willoughby* (Clark).

5937. Gates, A. I. Generalization and transfer in spelling. New York: Teachers College, Columbia Univ., 1935. Pp. vi + 80. \$1.25.—The monograph is a report of a two-year investigation of the effects of generalization and specific-learning programs in spelling, combined with a discussion of the psychology underlying different methods. The subjects were 3800 pupils in grades 2 to 8. In the generalization

group, rules as such were not taught, but "efforts to encourage pupils to see similarities and differences and generalize their experiences were made during each week." For the non-generalization method the words were arranged in lists on the basis of a combined difficulty and frequency-of-use criterion. Each word was treated as a specific spelling problem. The results show that the two methods produced practically the same ability to spell the words studied during the term; the generalization method produced greater ability to spell representative "new" words and to convert unstudied base forms into derived words by adding suffixes, etc. Tentative conclusions are given concerning particular rules and generalizations such as changing *y* to *i*, etc.—*R. Goldman* (Clark).

5938. Geoghegan, P. S., & Fitzgerald, J. A. Composition errors in letters written by children outside the school. *Elem. Sch. J.*, 1935, 35, 768-775.—The writers classify the errors made by 748 fifth-grade pupils in letters written outside the school.—*P. A. Witty* (Northwestern).

5939. Gerling, H. J. Educational problems. *Sch. & Soc.*, 1935, 42, 101-104.—There is at present a much greater tendency for pupils to persist in school than was formerly true. Of those in the second grade in 1883, for example, .2% reached the twelfth, whereas today 34% do. The author seems not to favor the homogeneous grouping of pupils as far as intellect is concerned, but rather presents a brief for that greater flexibility of instructional methods and materials which would make it possible to deal with each pupil in terms of his individual needs.—*H. L. Koch* (Chicago).

5940. Gilliland, A. R. The measurable effects of zoology on psychology grades. *J. educ. Psychol.*, 1935, 26, 384-387.—Students of general psychology who have had previous training in zoology are superior to those who have not had zoology in (1) their examination scores in the zoology part of general psychology, and (2) their final grades in psychology. The groups were equalized in terms of the percentile MA score, and the superiority was found in each of two separate studies.—*A. W. Melton* (Missouri).

5941. Gray, W. S., Gates, A. I., Horn, E., & Yoakam, G. A. Reading. *Rev. educ. Res.*, 1935, 5, 54-69.—A review of the literature from July, 1931, to July, 1934, covering: successive emphases in teaching methods; systematic versus incidental training in reading; development necessary before learning to read; merits of different methods of beginning reading; size of type and readability; methods of attacking words in primary reading; the value of phonetics; the value of activities and integrating in promoting growth in reading; individual and group differences; adaptation to individual needs; different methods of improving silent reading; improving reading achievement in the content fields; the value of practice exercises of the work type; the direct versus the incidental method of increasing meaning vocabulary in history and mathematics; the relation between rate and comprehension; the appreciation of literature;

relationships between intelligence, reading ability and other factors; serious deficiencies and remedial procedures; reading interests; campaigns to improve reading instruction. Bibliography of 83 titles.—*S. P. Hayes, Jr.* (Mt. Holyoke).

5942. Greene, H. A. English language. *Rev. educ. Res.*, 1935, 5, 37-44.—A review of the literature from January, 1931, to July, 1934, on special methods and the psychology of elementary-school English. Important new research techniques include electrical recording of language activities under experimental and classroom conditions and the use of Hollerith machine equipment in the mechanical analysis of oral and written language. Considerable research in language development has had a bearing on the content and placement of the curriculum. Methods have been evaluated, especially individual versus group instruction, variations in the length of the study period, size of classes, the comparison of dogmatic and inductive procedures in teaching rules and general principles, and group summaries. Remedial work is discussed. Test results show the need for definite improvement in the construction of measures of achievement. Bibliography of 120 titles.—*S. P. Hayes, Jr.* (Mt. Holyoke).

5943. Greene, H. A., & Jorgensen, A. N. *The use and interpretation of elementary school tests*. New York: Longmans, Green, 1935. Pp. xxviii + 530. \$3.75.—The volume is concerned with the problems of measurement of instruction encountered in the elementary school grades. Another volume will deal primarily with the problems of measurement at the secondary school level. The two volumes are intended to be a complete revision and expansion of *The Use and Interpretation of Educational Tests*, by the same authors. This text is intended for the class-room teacher and administrator. The construction of and criteria for the use of standardized tests are discussed. Chapters on the measurement, analysis, diagnosis and remedy in arithmetic, reading, language, spelling abilities, handwriting, social sciences, elementary sciences, and the fine arts are included. Throughout the authors stress the importance of the fact that measurement is not the end of class-room testing but rather a tool by which the instruction in the school can be adapted to suit the needs of any particular group. Appendix A contains names of publishers and distributors of test materials; B, lists of educational test materials arranged by subject matter; C, a glossary of terms.—*R. Goldman* (Clark).

5944. Greene, H. W. The education of negro leaders. *Sch. & Soc.*, 1935, 42, 134-136.—150 negro leaders in the United States, identified by reference to indexes of the *Who's Who* type, were found to be, in the main, well trained according to an academic degree criterion—i.e., to be in general products of the best American universities and colleges.—*H. L. Koch* (Chicago).

5945. Hadow, H. [Ed.] *Infant and nursery schools*. (Report of the consultative committee of the board of education.) London: H. M. Stationery Office, 1932. 2s.6d.—The two preceding volumes

issued by the committee dealt with the education of the adolescent and the primary school. The development and duties of the nursery school (for children aged 2 to 5 years) and infant school (5 to 7 years) are discussed.—*R. Goldman* (Clark).

5946. Hartmann, G. W. Comparative pupil gains under individual conference and classroom instruction. *J. educ. Psychol.*, 1935, 26, 367-372.—Two groups of 54 students of general psychology from the same class were matched with respect to average college grades. One group had three lectures per week and the other group had two lectures and a 20-minute conference. The all-lecture group scored higher on each of three objective tests given during the term, although the average difference was not statistically significant in the case of any one test. Only in the case of the term papers did the interview group excel, and again the difference was not statistically significant. "In short, a little personal treatment may make students a bit happier, but it demonstrably fails to raise their scholarship above the group level."—*A. W. Melton* (Missouri).

5947. Hovland, C. I., & Eberhart, J. C. A new method of increasing the reliability of the true-false examination. *J. educ. Psychol.*, 1935, 26, 388-394.—In the new method the significant or critical part of the statement is underscored and the students are instructed to "judge the truth or falsity of the statement principally on the basis of the truth or falsity of the underlined part." When the old and new forms of the same examination were given to students, the odd-even (corrected) reliability coefficients were .694 and .641 for the old form and .776 and .821 for the new form. However, the average scores of the students who used the two types of examination were not significantly different.—*A. W. Melton* (Missouri).

5948. Irwin, J. W. Manners and personality in school and business. A brief handbook for students in high schools and business colleges. Columbus, Ohio: School and College Service, 1933. Pp. 128. \$4.00.—*R. Goldman* (Clark).

5949. Kandel, I. L. Vocational education. *Encycl. Soc. Sci.*, 1935, 15, 272-275.—*L. A. Riggs* (Clark).

5950. Leining, E. B. Millions of years in a winter. New York: Lincoln School, Teachers College, Columbia University, 1935. Pp. x + 197. \$2.00.—The teacher's diary record of a science unit in the fourth grade of Lincoln School is the basis of this report. A year's work built around the children's interest in "the beginnings of things" was repeated with a second group for experimental purposes. The report contains, in addition to a narrative account of the class progress and associated activities integrated with the science unit in art, spelling, poetic expression, etc., a description of the development of a testing program to measure the value of the unit as a source of learnings in science. The results of the tests administered to the experimental group and to several control groups show the former to have made the greatest growth in science learnings. The appendix gives the complete text of two test forms used.—*M. P. Montgomery* (Faribault, Minn.)

5951. Letzter, M. C. Enriching the vocabulary. *Amer. Ann. Deaf*, 1935, 80, 264-271.—The author presents methods which she has used during the past two years in building up the vocabulary of two deaf girls, aged 16 and 18 years. The purpose of the work was to teach the girls "to express thoughts adequately and variedly by introducing new words, new expressions, and different ways of saying the same thing with the vocabulary already in hand." The method involved: (1) giving, pointing out, and asking for synonyms; (2) stressing opposite meanings; (3) use of prefixes; (4) comparisons of adjectives and adverbs; (5) pointing out the frequency of paired words; (6) pointing out words with double meanings; (7) discussions of special topics, pictures, current events, and fashion magazines; and (8) stimulating an interest in reading.—*C. V. Hudgins* (Clarke School).

5952. MacLatchy, J. H., & Van Nest, M. Activities in the nursery school, kindergarten, and elementary grades. *Rev. educ. Res.*, 1935, 5, 4-13.—A review of the literature from October, 1931, to July, 1934, concerning habits of personal care, the development of social behavior, uses of art material, books and music, play, learning, language and subject matter. Bibliography of 105 titles.—*S. P. Hayes, Jr.* (Mt. Holyoke).

5953. MacQuarrie, T. W. San Jose State College police school. *J. crim. Law Criminol.*, 1935, 26, 255-261.—This school was founded to give instruction to students planning to enter police work as a profession. The course of study is described.—*L. Ackerson* (Institute for Juvenile Research).

5954. Marzi, A. Indagini sulle "inclinazioni" professionali. (Investigations of professional interests.) *Riv. Psicol. norm. patol.*, 1935, 31, 104-125.—A questionnaire with questions dealing with individual preferences and aspirations in vocational selection was given to pupils in several industrial schools. 1600 replies were obtained, which revealed that the environment exercises a strong influence on the choice of a profession and that selections were seldom made on the basis of the attitudes a subject had or thought he had. 55% of the subjects did not show any decided preference for a given vocation. The choices made were not stable, judging from the replies obtained on a second questionnaire given to the same subjects some time later.—*T. M. Abel* (Sarah Lawrence).

5955. Mata, L. La orientación profesional y la universidad. (The employment guidance psychologist and the university.) *Arch. argent. Psicol. norm. pat.*, 1935, 2, 11-19.—Comparison of facilities for vocational orientation in the Argentine with those of other countries and a plea for the establishment of the orientation specialist in the universities for the purpose of: (1) determining aptitude for the professions; and (2) adjusting the number of trained candidates for the professions to the actual socio-economic need for them.—*R. M. Bellows* (Ohio State).

5956. Mendiague de Tossi, J. Los sordos-mudos y el problema de su desmutización. (Deaf-mutes and the problem of their desmutization). (Deaf-mutes

and the problem of their treatment.) *Arch. argent. Psicol. norm. pat.*, 1935, 2, 30-38.—Artificial methods of special instruction of deaf-mutes by way of visual and tactual modes are necessary. The following methodological sequence is suggested: (1) labial synthesis (the whole method) of words and phrases before teaching word articulation—comprehension even in the normal child develops before concise articulation; (2) practice in labial analysis of articulation (the part method); and (3) labial synthesis of words and phrases whose constitutive elements are then known by the child.—R. M. Bellows (Ohio State).

5957. Moore, J. E. Annoying habits of college professors. *J. abnorm. soc. Psychol.*, 1935, 30, 43-46.—A survey of the habits and mannerisms of 112 different teachers as observed by 123 different students was made. The most annoying habit reported is that of the professor rambling in his lectures. The students seem to fixate their gaze upon the face of their professor, judging from the reported frequencies of annoying facial habits. Pet expressions of some college teachers become so obvious that some students amused themselves by making small wagers on how often a certain professor will use his pet expression during an hour lecture.—C. H. Johnson (Boston Psychopathic Hospital).

5958. Myers, G. C. Learning to be likable. A brief discussion of personal problems. Columbus, Ohio: School and College Service, 1935. Pp. 128. \$4.00.—A booklet designed for grades 8 to 12 to aid students in a "happier solution of many of the common personality problems of youth."—R. Goldman (Clark).

5959. Oakley, C. A. A first survey of psychological testing in secondary and other schools. I, II. *Hum. Factor*, Lond., 1935, 9, 138-146; 186-200.—A preliminary survey of the extent to which psychological and other tests are in use in secondary schools in various parts of England.—M. Horsey (National Institute for Industrial Psychology).

5960. Paschal, F. C. The psychological foundations of education. *Proc. Tenn. Coll. Ass.*, 1935, 15-25.—The presidential address before the Tennessee College Association considers the various criticisms of the American college, particularly those having to do with method and organization in the undergraduate liberal arts program, and attributes several of them to the inadequate state of our knowledge regarding the later adolescent period. The more recent experimental work in motivation and in the measurement of attitudes is discussed in its bearing upon the problems of college teaching.—E. G. Bugg (Vanderbilt).

5961. Pendry, E. R., & Hartshorne, H. Organizations for youth; leisure time and character-building procedures. New York: McGraw-Hill, 1935. Pp. 371. \$2.75.—A description of the character and organization of 49 groups which carry on leisure-time and character-building programs with boys and girls.—R. R. Willoughby (Clark).

5962. Powers, S. R. Science. *Rev. educ. Res.*, 1935, 5, 70-74.—A review of the literature from

October, 1931, to July, 1934, on special methods and the psychology of elementary-school science. There are included American and foreign trends in the teaching of science, curriculum studies, the psychology of instruction, and the effects of learning on behavior. Bibliography of 16 titles.—S. P. Hayes, Jr. (Mt. Holyoke).

5963. Pritchard, R. A. The relative popularity of secondary school subjects at various ages. Part I. *Brit. J. educ. Psychol.*, 1935, 5, 157-179.—Eleven secondary school subjects were marked in order of preference by 4581 boys and 3692 girls in schools of known high-grade teaching. Chemistry for boys and English for girls consistently ranked first both in different types of schools and at all age levels represented. Reasons given for liking or disliking each of the subjects are quoted.—K. M. Cowdery (Stanford).

5964. Salisbury, R. Some effects of training in outlining. *Engl. J.*, 1935, 24, 111-116.—474 pupils in four high schools were given an intelligence test, a reading test, and a reasoning test. Half were then given thirty special training lessons in outlining. Matched pairs, the matching being based on IQ, MA, and reading ability, were secured and the members compared, one being from the experimental group and the other from the control group. Decided improvement in reading, in ability to solve reasoning problems, and in content subjects to which either written or mental outlining might be applied was noted in the experimental group.—S. P. Hayes, Jr. (Mt. Holyoke).

5965. Sandon, F. The necessary imperfections of an examination. *Brit. J. educ. Psychol.*, 1935, 5, 180-193.—In each examination situation there are found five principal sources of error causing fluctuation in grades, and therefore imperfect correlation with the unknown and unknowable criterion. Invalidity of questions, unreliability of questions, instability of candidates, fluctuations in weighting of items, and fluctuations on the part of graders render unlikely an examination which correlates with the criterion more than .8; a correlation of .95 is beyond reach of ordinary practice. The chief errors arise in the selection of questions and the candidates' response to them.—K. M. Cowdery (Stanford).

5966. Scates, D. E. Types of assumptions in educational research. *J. educ. Psychol.*, 1935, 26, 350-366.—A review of the assumptions which enter into the performance of educational research. Under technical assumptions are considered (1) assumptions of numerical equality for approximations, (2) formal assumptions of conditions which underlie the creation of new statistical tools, (3) informal assumptions of use which underlie the application of statistical analyses to obtained data. Under methodological assumptions are considered (1) the assumptions involved in the selection of a specific set of variables for control and study, (2) the assumptions inherent in the selection of the source and distribution of observations. A third group of assumptions known as social concern the usefulness and acceptability of the research product in the current culture. A fourth

group of assumptions known as *philosophical* are concerned with the nature of perception and cognition and the assumption of an orderly organization underlying the phenomena investigated.—*A. W. Melton* (Missouri).

5967. Seipt, I. E. [Ed.] *Education and the exceptional child*. Langhorne, Pa.: Child Research Clinic, The Woods Schools, 1935. Pp. 60.—This is a report of the proceedings of a conference held at the Woods Schools to discuss problems of general education, with special emphasis upon the exceptional child, the slow child, the problem child, the child with reading and speech defects, etc.—*R. Smith* (Clark).

5968. Sharp, W. R. *Teaching profession*. *Encycl. soc. Sci.*, 1934, 14, 543-553.—*L. A. Riggs* (Clark).

5969. Shaw, R. F. *Finger painting*. Boston: Little, Brown, 1934. Pp. 232. \$2.50.—Finger painting is a medium of recreation and artistic self-expression readily adapted to the abilities of the young child. It may also be used as a valuable clinical re-education technique. The author describes the use of finger painting in the cure of reading, arithmetic and speech defects, obsessive fears, and other behavior maladjustments.—*R. M. Stogdill* (Columbus).

5970. Shendarkar, D. D. *Research in education*. *Indian J. Psychol.*, 1934, 9, No. 1-2, 51-67.—The methods, aims, and scope of educational research are presented at some length. Sections are devoted to the origin of the problem, to the collection and statistical treatment of the data, and to pitfalls. The foundation of an institute of education is urged.—*H. Schlosberg* (Brown).

5971. Shuchowsky, R. E., & Flemming, C. W. *The English teacher makes room for remedial reading*. *Engl. J.*, 1935, 24, 122-128.—Remedial work was conducted during regular class periods. A control group was matched with the experimental group in reading ability, in average and median mental age, and in IQ. During less than a term the experimental group had made an average gain of 1.7 years in reading comprehension, while the control group gained .4 year. The regular English work was definitely improved.—*S. P. Hayes, Jr.* (Mt. Holyoke).

5972. Smith, L. *The status of marking in negro colleges*. Bluefield, W. Va.: Bluefield State Teachers College, 1935. Pp. 40.—*R. R. Willoughby* (Clark).

5973. Stewart, R. A. *Dedicated to the low IQ*. *Engl. J.*, 1935, 24, 204-207.—Adapting a high-school English course to a class of 35 boys with an average IQ of 76. Foundations for interest in the *Odyssey* were laid by study of Byrd and "Seth Parker" expeditions. Poetry was introduced by examples of primitive and natural rhythms. Special problems involved in treating boys of low IQ are discussed.—*S. P. Hayes, Jr.* (Mt. Holyoke).

5974. Strang, R. *The role of the teacher in personnel work*. (Rev. ed.) New York: Teach. Coll., Columbia Univ., 1935. Pp. xiii + 417. \$2.50.—This book constitutes a short orientation course in personnel work for teachers. It aims: "(1) to describe briefly the teacher's role in personnel work; (2) to

present methods and information useful in the identification and solution of problems of students; and (3) to describe and discuss technics which will enable teachers both to make their own contacts with students more worth while and to coöperate more intelligently with specialists."—*S. Rosenzweig* (Worcester State Hospital).

5975. Strang, R. *Health and physical education*. *Rev. educ. Res.*, 1935, 5, 48-53.—A review of the literature from October, 1931, to July, 1934, on special methods and the psychology of elementary-school health and physical education. The learning process in the teaching of hygiene, psychological analysis of skill in sports, the learning of rhythmic patterns, the relationships between health, motor ability, intelligence and other factors, measurements of athletic ability and achievement, ratings on personality traits and questionnaires on health habits, and teaching methods are covered. Bibliography of 106 titles.—*S. P. Hayes, Jr.* (Mt. Holyoke).

5976. Stullken, E. H. *How the Montefiore School prevents crime*. *J. crim. Law Criminol.*, 1935, 26, 228-234.—The Montefiore School was assigned by the Chicago Board of Education to care for boys aged 10 to 17 who need special attention educationally, psychologically, and medically. It combines many of the advantages of a child guidance clinic with those of a special school. It is staffed by specially selected teachers, a pediatrician, dentist, psychologist, and social workers. Its aim is to prevent the further development of behavior problems among the pupils. The attendance record has been over 89% in spite of the fact that 65% of the boys were habitual truants formerly. Less than 18% of all boys enrolled have had to be taken into the Juvenile Court. Over 84% of those returned to regular schools have made good. "These facts seem to indicate that special education and special attention will prevent truancy and delinquency. Possibly the outstanding accomplishment of the school is the improvement in pupil conduct and in development of character. The school is more important in the lives of these problem children than in that of ordinary children because it is not only an educative force, but also often the only agency giving them an opportunity to adjust to the world in which they live."—*L. Ackerson* (Institute for Juvenile Research).

5977. Thomson, G. H. *Group factors in school subjects*. *Brit. J. educ. Psychol.*, 1935, 5, 194-199.—Commenting on the controversy between J. H. Wilson and W. G. Emmett as to factor patterns involved in a school certificate examination, attention is called to the fact that an infinite number of factor patterns can be constructed to explain any set of correlations. Illustrations of a number of combinations are given using Wilson's data.—*K. M. Cowdery* (Stanford).

5978. Thorburn, A. *Psychological and other aspects of recent tendencies in German education*. *Brit. J. educ. Psychol.*, 1935, 5, 117-138.—In the Hitler regime the primary aims of education are the maintenance of a pure and healthy race primarily

through physical education, character training and ordinary instruction in knowledge that should be useful and direct, but general in nature with later specialization. Notable experiments in education include labor service with its educational and nationalizing features, the *Landjahr* giving children at age 14 a year of rural community life and appreciation of its place in the national life, national youth day (Saturday) devoted to organized youth activities for the national benefit. The main existing types of schools are listed. The conclusion is drawn that the experimental activities are frankly for purposes of indoctrination.—*K. M. Cowdery* (Stanford).

**5979. Toops, H., & Kuder, G. F. Measures of aptitude.** *Rev. educ. Res.*, 1935, 5, 215-228.—A review of the literature from January, 1932, to January, 1935, on aptitude testing, covering certain fallacies common in this field, the inadequacy of first-degree regression equations, the need of a standard group for reporting reliability and validity, the need for interpreting scores in relation to the individual's stage of development, the criteria of aptitude tests, the evaluation of test programs, including state-wide cooperative programs, the question of scholastic aptitude and its relation to intelligence, achievement tests, study time, personality characteristics, and combinations of various factors. Special attention is given to scholastic aptitude in specific fields: dentistry, engineering, law, medicine, music, nursing, teaching, mechanics, clerical work, law enforcement, selling and sales managing, automobile driving, street-car driving and bus operating, and aviation piloting. Test administration is discussed. Bibliography of 112 titles.—*S. P. Hayes, Jr.* (Mt. Holyoke).

**5980. Tyler, R. W. Elements of diagnosis.** *Yearb. nat. Soc. Stud. Educ.*, 1935, 34, 113-129.—Diagnosis involves measurement or appraisal and interpretation or inference. The measurement of human behavior involves four technical problems: (1) the definition of behavior to be evaluated; (2) the selection of test situations; (3) the construction of a behavior record; (4) the evaluation of the observed behavior. The critical definition and identification of significant behavior is important. In a situation to be evaluated extraneous factors should be adequately controlled, together with a demand for an economy of time, effort and facilities for observation. There should be direct evidence of significant behavior and every attempt made to maintain reliability of responses. Records should indicate any significant reactions, while their construction must be essentially practical. The experience of the diagnostician and the carefulness of his thinking affect the validity of the inferences involved in his interpretation. "Controlled experimentation rather than correlation is necessary to establish causal relationship." Any program of educational diagnosis must be continually evaluated in the light of the evidence that relates to its effectiveness.—*P. S. de Q. Cabot* (Harvard).

**5981. Van Voorhis, W. R., & Miller, A. C. The influence of college training upon success after college as measured by judges' estimates.** *J. educ. Psychol.*,

1935, 26, 377-383.—The success of 582 graduates (1928) of Pennsylvania State College was judged by 67 judges, who were instructed to indicate those most successful and those least successful. Tetrachoric correlations between success and other factors such as college grade-point averages, participation in athletics, etc., were obtained. The correlations of success with 13 such factors, and all the intercorrelations, are presented. College grade-point average was found to be the most significant of all the items tested in relation to success when all the other items were held constant by the partial correlation technique ( $r = .516$ ).—*A. W. Melton* (Missouri).

**5982. [Various.] [Report on the activity of various centers for vocational guidance in Poland.]** *Psychotechnika*, 1933, 7, 52-58; 136-138.—*R. R. Willoughby* (Clark).

**5983. Watson, A. E. Experimental studies in the psychology and pedagogy of spelling.** *Teach. Coll. Contrib. Educ.*, No. 638. Pp. xi + 144.—Results are reported under four headings: (1) studies in spelling abilities and spelling vocabularies of high-school students; (2) studies in spelling errors of high-school students; (3) tentative plan for diagnostic and remedial procedures; (4) studies in methods of teaching spelling. The experimentation extended intermittently over a period of eight years and embraced a wide variety of school conditions. "Economy in learning to spell appears to be likely to result from re-emphasis upon the importance of developing sufficient techniques for dealing with relationships among spelling units." The bibliography lists 86 titles. The book is indexed.—*J. M. Stalnaker* (Chicago).

**5984. Wesley, E. B. Social studies.** *Rev. educ. Res.*, 1935, 5, 75-82.—A review of the literature from October, 1931, to July, 1934, on special methods and the psychology of elementary-school social studies, including: the relation of the school to certain social forces which often attempt to influence its teaching; size of classes; materials and equipment; the curriculum; problems in learning; study methods; problems in teaching; vocabulary studies; types of tests. Bibliography of 74 titles.—*S. P. Hayes, Jr.* (Mt. Holystone).

**5985. Williamson, E. G. Estimation versus measurement of improvement in English.** *Sch. & Soc.*, 1935, 42, 159-162.—Upon entrance to college 133 students were given a test in English usage, spelling, and vocabulary, and 21 months later they were given a parallel form of the same test. The women out-ranked the men on both tests, but the men gained relatively more in usage and as much in vocabulary as did the women. When the amount of improvement made is considered in relation to the number and type of English courses taken during the 21 months, it is noted that a group carrying no English gained almost as much as did those who took a five-unit sequence in English literature and composition, and as much as a group credited with three units of composition work. In general, the magnitude of the gain tended to be inversely proportional to the score made on the

original test. The author believes that amount of gain as well as final status should be taken into account when assigning students' grades.—*H. L. Koch* (Chicago).

5986. **Woody, C.** Arithmetic. *Rev. educ. Res.*, 1935, 5, 14-30.—A review of the literature from July, 1930, to July, 1934, concerning special methods and the psychology of arithmetic. The following are covered: children's early number experiences; mental age and achievement in arithmetic; methods of teaching subtraction; short and long division priority; learning conditions; abstract versus meaningful drill; familiarity with problem situations; methods of presentation; transfer of training; diagnosis and remedial instruction; permanence of improvement; level of attainment in college; problem analysis and problem solving; selection and arrangement of subject matter; vocabulary studies; sex differences. Bibliography of 97 titles.—*S. P. Hayes, Jr.* (Mt. Holyoke).

[See also abstracts 5468, 5507, 5605, 5725, 5741, 5742, 5751, 5775, 5782, 5785, 5786, 5793, 5802, 5812, 5892, 5994, 6017, 6032, 6033, 6045, 6048.]

#### BIOMETRY AND STATISTICS

5987. **Chapman, D. W.** The generalized problem of correct matchings. *Ann. math. Statist.*, 1935, 6, 85-95.—This paper derives formulas to estimate (1) the significance of a given number of correct matchings resulting from a single trial, and (2) the significance of a given mean number of correct matchings resulting from independent trials, when the two series to be matched are of unequal length, the longer series to contain a number of irrelevant items.—*J. W. Dunlap* (Fordham).

5988. **Dufton, A. F.** Graphic statistics. *Proc. R. phys. Soc. Lond.*, 1934, 46. Pp. 47.—*R. R. Willoughby* (Clark).

5989. **Edgerton, H. A.** A formula for finding the average correlation of any one variable with the  $(n - 1)$  other variables without solving any of the individual correlations. *J. educ. Psychol.*, 1935, 26, 373-376.—The formula is given and a detailed example of its operation is worked through.—*A. W. Melton* (Missouri).

5990. **Feldman, H. M.** Mathematical expectation of product moments of samples drawn from a set of infinite populations. *Ann. math. Statist.*, 1935, 6, 30-52.—The paper presents generalized formulae for both the first moment and the variance of product moments of any order.—*J. W. Dunlap* (Fordham).

5991. **Fisher, R. A.** Probability, likelihood, and quantity of information in the logic of uncertain inference. *Proc. roy. Soc.*, 1934, 146A, No. 856, 1-8.—*R. R. Willoughby* (Clark).

5992. **Jeffreys, H.** Probability and scientific method. *Proc. roy. Soc.*, 1934, 146A, No. 856, 9-16.—*R. R. Willoughby* (Clark).

5993. **Lewis, W. T.** A reconsideration of Sheppard's corrections. *Ann. math. Statist.*, 1935, 6, 11-20.—Lewis criticizes the assumptions underlying

Sheppard's corrections for grouping errors, suggests certain other assumptions, and finally offers new formulas based on these assumptions. In terms of computation these new formulas compare favorably with Sheppard's.—*J. W. Dunlap* (Fordham).

5994. **Tadera, A.** A study on the order-of-merit method. *Jap. J. exp. Psychol.*, 1935, 2, 119-128.—Two groups of male students, one consisting of 95 in number attending a normal school and the other of 105 attending a college, were required to rank 14 given male vocations and 17 female ones with regard to their importance as well as to their personal liking or dislike for them. The same ranking experiments were repeated after a month with the same students, and correlation between the average scores of the first and the second ratings as to each vocation was measured. A rather high correlation between the first and second ratings indicates that results obtained with the order of merit method are to a certain degree reliable. The serial orders of some vocations are, however, slightly different in the first and second experiments. This tendency to shift is found more often in the vocations which are in the middle of the serial order.—*R. Kuroda* (Keijo).

5995. **Thomson, G. H.** Note by Prof. G. H. Thomson. *Brit. J. Psychol.*, 1935, 25, 494.—A reply to W. Stephenson's paper, *On Thomson's Theorem for Measuring g by Overlapping Tests* (see IX: 4375).—*R. R. Willoughby* (Clark).

5996. **Thomson, G. H.** On complete families of correlation coefficients, and their tendency to zero tetrad differences: including a statement of the sampling theory of abilities. *Brit. J. Psychol.*, 1935, 26, 63-92.—The author gives a full restatement of his attitude to the Spearman factor theory and to the recent experiment of Brown and Stephenson. They claimed that the distribution of their tetrad differences fitted in with the two-factor theory, but was narrower than the distribution to be expected on the sampling theory. Thomson shows that this result was due to their elimination of any tests which gave group factors, i.e. to the fact that their tests were not a random sample. By an extension of Mackie's work on complete families of correlations, it is found that the sampling theory accounts equally well for the tendency to zero tetrad differences; certain other objections to this theory are also answered. He concludes that *g* is a useful mathematical description, but has no more psychological reality than, say, a standard deviation; factor analysis provides no evidence whatever about causal entities. Though an unlimited number of factor analyses of the same correlation matrix are equally possible, he prefers the sampling theory as being more congruent with contemporary psychological principles. On this theory the ability at a test is ascribed to a sample of the innumerable small underlying components, inherited and acquired, which go to make up the organic structure of the mind.—*P. E. Vernon* (Cambridge, England).

5997. **Thomson, G. H.** The factorial analysis of human abilities. *Hum. Factor, Lond.*, 1935, 9, 180-

185.—A comparatively popular account, by the chief English opponent of the Spearman school, of his criticisms of the theory and practice of factorial analysis.—*M. Horsey* (National Institute for Industrial Psychology).

5998. Thurstone, L. L. *The vectors of mind*. Chicago: Univ. Chicago Press, 1935. Pp. xv + 266. \$4.00.—A definitive statement of the position and techniques of the generalized program of factor analysis at date. The argument proceeds in terms of the application of matrix theory to the evaluation of correlation tables, and a mathematical introduction is therefore given to acquaint the reader with the groundwork. Other chapters are: the factor problem; the fundamental factor theorem; the centroid method; the principal axes (including Hotelling's special case); the special case of rank one (Spearman's original attack); primary traits; isolation of primary factors; the positive manifold; orthogonal transformations; the appraisal of abilities. There are appendixes on the concrete steps involved in calculations by the centroid method, a method of finding the roots of a polynomial, and a method for extracting square root with a mechanical calculator; there are also an index and an informative preface.—*R. R. Willoughby* (Clark).

5999. Toops, H., & Kuder, G. F. *Test construction and statistical interpretation*. *Rev. educ. Res.*, 1935, 5, 229-241.—A review of the literature from January, 1932, to January, 1935. Significant developments have been: (1) definite attempts to improve statistical reporting and statistics teaching; (2) the introduction of the topic of estimation on a scientific basis; (3) a growing literature on profiles and patterns and their significance; (4) wholesale, state-wide testing programs; (5) more complicated equations, particularly those involving time as a function; (6) a little application of much factor theorizing; (7) great advances in the applications of statistical methods to research; (8) a beginning in the theory of criteria; (9) progressive developments in multiple-regression solving, in item analysis, and in alternative techniques of test building; (10) a growing number of applications of statistics to novel problems. Bibliography of 138 titles.—*S. P. Hayes, Jr.* (Mt. Holyoke).

6000. Wert, J. E. *Educational statistics; from a non-computational viewpoint*. Columbus, Ohio: Author, 1935. Pp. 132. \$1.75.—This planographed volume is intended to enable the student critically to appraise and interpret the findings of published studies. The assumptions which must be fulfilled before the ordinary statistical measures can be legitimately used are given. Practice exercises dealing with the interpretation of given material are included. Appendix A consists of exercises in computing statistical measures; Appendix B includes tables of squares, square roots, reciprocals, logarithms of numbers, sigma scores of percentage values, etc. The third appendix consists of formulas.—*R. Goldman* (Clark).

6001. Wilson, J. H. *The exactness of 'g' as determined by certain intelligence tests*. *Brit. J.*

*Psychol.*, 1935, 26, 93-98.—The intercorrelations of 31 mental tests were analyzed for each of the age groups ten, eleven, twelve and thirteen. These intercorrelations were reproduced to a satisfactory degree of goodness of fit in terms of a common factor and several specific factors; the latter were found to be real. The degree of indeterminateness of the numerical factor was evaluated and found to be less than any which the writer had so far been able to find.—*M. D. Vernon* (Cambridge, England).

6002. Wong, K. Y. *An application of orthogonalization process to the theory of least squares*. *Ann. math. Statist.*, 1935, 6, 53-75.—This is a discussion of a new method for evaluating the parameters in a set of normal equations. An algebraic derivation of a set of normal equations, the necessary condition in a set of observational data so that Gauss' method is applicable, and finally the relationship between the Gauss method of solution and the orthogonalization is presented. No arithmetical example is given.—*J. W. Dunlap* (Fordham).

6003. Yates, F. *Some examples of biased sampling*. *Ann. Eugen., Camb.*, 1935, 6, 202-213.—Three examples are presented in the paper to show that when the element of personal selection enters the results are biased. This bias may be eliminated by sampling so that two or more sampling units are obtained, these samples to be a random selection from the aggregate of all possible selections; and the sampling units must be approximately of the same size and pattern. Further, the selection of samples must be determined by a process uninfluenced by the qualities of the objects and free from any bias on the part of the observer.—*J. W. Dunlap* (Fordham).

6004. Zerilli, V. I. *Note on scoring tests of multiple weighted items*. *J. educ. Psychol.*, 1935, 26, 395-397.—It is suggested that the scoring of scales which use negative and positive values (e.g. Bernreuter Personality Inventory) is greatly simplified if all values are converted into positive numbers. The procedure is given in detail.—*A. W. Melton* (Missouri).

[See also abstract 5977.]

#### MENTAL TESTS

6005. Asher, E. J. *The inadequacy of current intelligence tests for testing Kentucky mountain children*. *J. genet. Psychol.*, 1935, 46, 480-486.—Myers Mental Measure and National Intelligence Test, Scale B, and Stanford and Herring Revisions showed median IQ scores between 67.7 and 72.9. Taken in conjunction with the low socio-economic status, as established by another survey, and the incidental fact of a definite decline in tested IQ with age, these tests are held to be inadequate for children of this cultural level of opportunity.—*J. F. Dashiell* (North Carolina).

6006. Baker, H. J. *Intelligence and its measurement*. *Rev. educ. Res.*, 1935, 5, 187-198.—A review of the literature from January, 1932, to January, 1935, on the nature of intelligence, clinical interpreta-

tion, both normal and psychopathic, mental growth, constancy of the IQ, pre-school studies, adult variability and senescence, test standardization and variability, test comparability and group test equivalent scores, new tests and revisions, including foreign tests, and tests of special abilities. Bibliography of 131 titles.—*S. P. Hayes, Jr.* (Mt. Holyoke).

6007. Cohen-Henriquez, P. Intelligentietests. I. (Intelligence tests. I.) *Mensch en Maatsch.*, 1935, 11, 94-108.—*R. R. Willoughby* (Clark).

6008. Elwood, M. I. A statistical study of results of the Stanford Revision of the Binet-Simon Scale with a selected group of Pittsburgh school children. *Pittsb. Schools*, 1935, 9, 116-140.—This study deals with the responses of 1821 Pittsburgh school children whose mental ages ranged from 4 years, 7 months through 10 years, 6 months, with IQ's below 90. A secondary group of 495 cases with comparable mental age range but IQ's above 90 was used for comparison. Six tests of the Stanford Revision of the Binet-Simon Scale were passed by less than 50% of the children of the mental age at which the tests were standardized. The responses on the vocabulary test show this group of Pittsburgh children scoring about one year below the standard score for their mental age. Seven tests were found to be placed relatively too low in the scale for this group. Relative difficulty of sub-tests and relative difficulty of tests for normal and subnormal children of the same mental age are shown. The scatters of responses of normal and subnormal children were not significantly different. The results of the study show the effect of short-cuts in testing with the Stanford Revision of the Binet-Simon Scale. Results have been figured for the "starred" tests and for the minimum range (going back on the scale no farther than the year which yielded only one failure and forward only through the year at which there was only one success). The mental ages and IQ's obtained by these methods are not significantly different for group averages, but do show marked differences in individual cases.—*C. A. Whitmer* (Pittsburgh).

6009. Fauville, A. La mesure de l'intelligence. (The measurement of intelligence.) *Etud. class.*, 1934, 3, 168-173; 319-337.—The author summarizes briefly the methods of measuring intelligence and the results obtained, including the Binet scale, the revisions of Burt and Terman, and the CAVD scale of Thorndike.—*R. Nihard* (Liége).

6010. Hildreth, G. Applications of intelligence testing. *Rev. educ. Res.*, 1935, 5, 199-214.—A review of the literature from January, 1932, to January, 1935, on test applications for scholastic purposes in high schools, colleges and professional schools; for clinical purposes among delinquents, prisoners, criminals, defectives, the gifted and those of uneven abilities; for vocational guidance; in the study of individual differences in intelligence and mental development; in the study of the relation of intelligence to physical status, environmental conditions, other mental traits and racial characteristics. Bibliography of 236 titles.—*S. P. Hayes, Jr.* (Mt. Holyoke).

6011. Katō, M. An experimental genetic study of behavior forms in "the ball and field test." *Jap. J. exp. Psychol.*, 1935, 2, 59-88.—"The behavior in the abstract situation shows more intellectual characteristics, and the behavior in the concrete situation shows, on the contrary, more instinctive characteristics."—*R. Kuroda* (Keijo).

6012. Kirihara, H. General intelligence test and its norm: I. Standardization of intelligence tests for children, adolescents, and adults. II. Mental development of the Japanese. *Rep. Inst. Sci. Labour, Kurasaki*, 1934, No. 25. Pp. 30.—The author presents a new intelligence test and discusses details of method, instructions, scoring, etc., involved in its administration. Results of the examination of 6090 males and 5859 females are presented, including reliability and validity coefficients, percentile and standard deviation norms.—*R. Smith* (Clark).

6013. Maekawa, S., & Yendō, O. A scale of performance tests in kindergarten children. *Jap. J. exp. Psychol.*, 1935, 2, 27-58.—It was generally concluded that the performance tests of Pintner and Paterson are methods suitable for measuring the mentality of children. They are not only necessary for speech defectives, foreign children, and the deaf, but also play an important role in measuring mentality as a supplement to other scales which depend entirely or in part upon language responses. Experimental data concerned were those obtained from 303 children of three kindergartens in Kobe.—*R. Kuroda* (Keijo).

6014. Oden, M. H., & Mayer, B. A. A study of the effect of varying the procedure in the ball and field test. *J. genet. Psychol.*, 1935, 46, 335-348.—To discover what types of response are involved in the "ball and field" test, it was given (in the diamond form) with three degrees of explicitness of instructions: (1) to make any lines the examinee wished, (2) to draw a line wherever he would walk, (3) to show how he would hunt for a lost purse with money in it. Pupils of grades 2, 5, and 7 were used. Results were scored by the standards of the new revision of Stanford-Binet as failure, inferior, and superior. Procedure (3) showed advantage over the others only with the oldest children and those using a superior response; but no clear differentiation between failure and inferior quality could be made in the responses to procedures (1) and (2); and it is concluded that the inferior scoring is unjustified and should not be used.—*J. F. Dashiell* (North Carolina).

6015. Weiss, A. B. Qualitative intelligence testing as a means of diagnosis in the examination of psychopathic children. *Amer. J. Orthopsychiat.*, 1935, 5, 154-179.—This writer illustrates the use of qualitative aspects of a subject's performance in a battery of intelligence tests for diagnosing unusual defects in ability. When the subject dispatches the work of clearly defined tasks without anything conspicuous occurring, and when the quantitative results are in accord with his general accomplishments, the main purpose of the test is fulfilled by the quantitative result. But when anything unusual happens, the examiner must adjust himself to the course of the

subject's performance so that he can make a clear analysis of peculiar defects.—*J. McV. Hunt* (Worcester State Hospital).

[See also abstracts 5523, 5762, 5767, 5920, 5998, 6001, 6045.]

#### CHILDHOOD AND ADOLESCENCE

6016. Aichhorn, A. **Wayward youth.** New York: Viking Press, 1935. Pp. xiii + 236. \$2.75.—A translation (by E. Bryant, J. Deming, M. O. Hawkins, G. J. and E. J. Mohr, H. Ross, and H. Thun) and adaptation of the second German edition (Vienna 1931) of *Verwahrlose Jugend*. The chapters were originally lectures before the training classes of the Vienna Psychoanalytical Society. The chapter topics are: introduction, the analysis of a symptom, some causes of delinquency, underlying causes of delinquency, the transference, the training school, the aggressive group, the meaning of the reality principle in social behavior, significance of the ego-ideal in social behavior; the points made are fully illustrated with case material from the author's school for delinquents. Auxiliary material includes a foreword by Freud, a note about Aichhorn by the editors, and a portrait of him on the jacket.—*R. R. Willoughby* (Clark).

6017. Bailey, E. W., Laton, A. D., & Bishop, E. L. **Outline for study of children in schools. I. Principles of child study. II. Study of the child in pre-school. III. Study of the child in elementary school. IV. Study of the child in secondary school.** New York: McGraw-Hill, 1935. Pp. 77; 50; 67; 64. \$.75, .50, .50, .50.—*R. R. Willoughby* (Clark).

6018. Balista, V. **Sobra a assistencia a menores anormaes.** (Aid to the abnormal minor.) *Rev. Neurol. Psychiat. S. Paulo*, 1935, 1, 267-271.—A plea for general centralized educational and medical aid for the deficient child.—*R. M. Bellows* (Ohio State).

6019. Bernfeld, S. **Die psychoanalytische Psychologie des Kleinkindes.** (The psychoanalytic psychology of the young child.) *Z. psychoanal. Pädag.*, 1934, 8, 5-16.—*R. R. Willoughby* (Clark).

6020. Billings, M. L. **A report of a case of inverted writing and drawing.** *Child Develpm.*, 1935, 6, 161-163.—The case is described of a dominantly right-handed boy six years and ten months old, with an IQ of 95, whose first attempts in writing and drawing in school were inverted. With patient and sympathetic help and with encouragement to write from copy he is reported as making steady improvement in normal writing.—*F. D. McTeer* (Wayne University).

6021. Bühler, C. **From birth to maturity.** London: Kegan Paul, 1935. Pp. xiv + 237. 7/6.—The book is based largely on the result of ten years of first-hand study in the Psychological Institute of Vienna. The early part deals with the pre-school child and the later portion with older children up to and including adolescence. Concise descriptions are given of the methods of study adopted and of their main results. There are many references to and some criticisms of relevant contemporary studies. Attention is also

given to hereditary and environmental factors in mental development in the light of recent research. A bibliography is appended.—*F. C. Bartlett* (Cambridge, England).

6022. Carberry, M. A. **An attempt to determine the consistency of judgments regarding the adjustment status of children examined by a child guidance clinic.** *J. juv. Res.*, 1935, 19, 75-92.—The study concerns ratings on adjustment status given 305 children who had passed through the hands of the California Bureau of Juvenile Research in a four-year period. From two to four ratings were obtained for each child from parents, teachers, local workers, and Bureau workers. It was found that the percentage of agreement when three raters were used differed from that which obtained when two were employed. Between the cases when three and four judges rated, no reliable differences were apparent. The local and Bureau worker, and the local worker and teacher, tended to agree slightly more often than did the other classes of judges. The rater groups ranked in the order of the favorableness of the verdicts they gave on the children were: parent, Bureau worker, local worker, and teacher. The largest percentage of children in the study were judged "partially adjusted"; the next largest, "completely adjusted." It is recommended that when the adjustment of a child is to be estimated a parent, a teacher and a local worker, if possible, be called upon for opinions, as each of these sees the child in a different type of environment.—*H. L. Koch* (Chicago).

6023. Davidson, M. **The relationship of adjustment status of child guidance clinic cases to age, mental capacity and school placement.** *J. juv. Res.*, 1935, 19, 160-170.—The study represents an attempt to determine the relationship between the degree of adjustment attained by problem children under clinical guidance and their age, mental age, IQ, school placement, and school status at the time of treatment. The subjects used in the investigation were 200 children followed by the California Bureau of Juvenile Research. The members of all of the groups formed by classifying the children in accordance with the items mentioned above had on the average reached a fairly good degree of adjustment. Using an "extreme-group" method of evaluating the prognostic significance of the items, the author concludes that children with the following traits are more likely to adjust well than to be worse as a consequence of clinic guidance: chronological age below 15 years, mental age from 6 to 12, normal or superior intelligence, school placement below the seventh grade, and school placement on a par with mental age. An adjustment prognosis score weighted by all of the factors mentioned above proved to have some worth.—*H. L. Koch* (Chicago).

6024. Dearborn, W. F. **The mental and physical development of public school children.** *Sch. & Soc.*, 1935, 41, 585-593.—The author gives a brief review of some of the findings of a very extensive study of the physical and mental growth of children. The investigation involved as many as 3000 children as

remained in three small school systems for 12 years. In the case of most indexes the measurements of the children were taken annually. The measures studied included standing, sitting, and porion height; height at sternal notch; weight; chest width and depth; iliac diameter; head width and length; tooth count; X-rays of the carpal bones; reading, arithmetic and other achievement tests; two group intelligence tests; and the Stanford-Binet test, the latter being given, however, to every child only about three times during the 12-year period. The findings throw light on many issues, among which are the following: sex, racial, and occupational group differences in physical and mental traits; suitable age standards for various developmental indices; the utility, reliability, and validity of many new measures, among which are some descriptive of the volume of the trunk and legs; the constancy of the IQ; the extent of the equivalence of IQ's obtained from different tests; the relation between school achievement of various sorts and IQ; and the extent of the correlation between mental and physical growth.—*H. L. Koch* (Chicago).

6025. Delman, L. The order of participation of limbs in responses to tactual stimulation of the newborn infant. *Child Develpm.*, 1935, 6, 98-109.—Careful analysis of the time sequences in motion pictures of 472 responses of three newborn infants to finger flips on the sole of the foot and on the palm of the hand on both sides of the body show that "in general the initial response occurs in the stimulated limb in about one-third of the cases, in the homolateral limb in about one-sixth and the contralateral and diagonal limbs in about one-fourth of the cases each. More first responses occur in the legs than in the arms." "The second response appears to be unrelated to the place of stimulation, but half of the second responses are contralateral to the first responding limb."—*F. D. McTeer* (Wayne University).

6026. Durea, M. A. Mental and social maturity in relation to certain indicators of the degree of juvenile delinquency. *Child Develpm.*, 1935, 6, 154-160.—An investigation of the cases of 365 delinquent boys gives evidence that mental and social maturity as indicated by National intelligence test scores and Fursey developmental age quotients bear no significant relationship to indicators of the degree of delinquent behavior, such as the frequency of appearance in court and the number and types of offenses committed.—*F. D. McTeer* (Wayne University).

6027. Fischer, H., & Peller, L. Eingewöhnungsschwierigkeiten im Kindergarten. (Habit difficulties in the kindergarten.) *Z. psychoanal. Pädag.*, 1934, 8, 33-36.—*R. R. Willoughby* (Clark).

6028. Fitz-Simons, M. J. Some parent-child relationships, as shown in clinical case studies. *Teach. Coll. Contrib. Educ.*, 1935, No. 643. Pp. xi + 162.—Each of 92 statements concerning parent-child relationship was evaluated by clinicians on the basis of the degree of attachment of the parent for the child. A "guide" of 46 items (weighted from -4 to +4) and 12 "key points" (weighted + or -) was constructed from the results. The application of the guide to

secure an attitude score was made by two persons independently on 48 case records of problem children. A reliability of .80 was obtained. A validity coefficient of .54 is reported between the attitudes estimated from the guide and those based on the staff reports. The guide was applied to 94 case records from demonstration child guidance clinics. Cases were selected in which there was no physical defect, IQ over 85, both parents living at home, economic status comfortable. The cases are divided according to the results and comparisons of behavior made. The guide is given in the appendix. The bibliography lists 107 titles.—*J. M. Stalnaker* (Chicago).

6029. Goodenough, F. L. The development of the reactive process from early childhood to maturity. *J. exp. Psychol.*, 1935, 18, 431-450.—By means of the Miles reaction board it was found possible to determine the speed of simple reaction to an auditory stimulus with a satisfactory degree of reliability in subjects as young as 3½ years. The development of the reactive process during childhood was shown not merely by improved speed of reaction but to an even more marked degree in the gaining of voluntary control over the motor act. A slight sex difference in favor of the males was found. Only a slight relationship was found between scores on intelligence tests which do not involve speed and the speed of a simple reaction. The correlations between speed of reaction and tests in which speed is a factor, although not high, were positive at all ages and for both sexes. No relationship between speed of reaction and socio-economic status was apparent. The relationship of reaction speed to height and weight was positive but very low. Degree of physical activity as indicated by time-sampling observations in the nursery school and kindergarten showed a small positive relationship to speed of reaction. Amount and frequency of laughter during play was found to be positively related to reaction speed, but the correlations were not high.—*H. W. Karn* (Clark).

6030. Goodenough, F. L., & Smart, R. C. Interrelationships of motor abilities in young children. *Child Develpm.*, 1935, 6, 141-153.—A multiple-factor analysis of the scores of 154 children aged 2½, 3½, 4½, and 5½ years on seven different tests of motor abilities "suggests the existence of at least one common factor running through all the tests and indicates also the probability of one or more group factors entering into several of them."—*F. D. McTeer* (Wayne University).

6031. Healy, W. Psychiatry and the juvenile delinquent. *Amer. J. Psychiat.*, 1935, 91, 1311-1322.—"As far as psychiatry is concerned it still remains that the most direct method of ascertaining the essential sources of the trouble in the individual case is through studying the mental life, gaining understanding of emotional attitudes and the ideational content." The usual clinical service offered to the courts is that of diagnostic evaluations and recommendations; seldom is there opportunity for psychiatric work with the individual cases.—*R. Goldman* (Clark).

6032. Hildreth, G., & Martens, E. H. Selected references from the literature on exceptional children. *Elem. Sch. J.*, 1935, 35, 694-706.—Listed and annotated by the authors are 71 references from the literature on subnormal and backward, behavior and problem, superior and gifted, blind and partially seeing, deaf and hard-of-hearing, delicate, and speech-defective children. Three general references are given.—P. A. Witty (Northwestern).

6033. Hobson, J. R. Physical growth and school achievement at adolescence. *Harv. Teach. Rec.*, 1935, 5, 155-164.—Using the records of the Harvard Growth Study, the physical and mental growth of 522 boys during the two years beginning at age 12, and of 550 girls during the two years beginning at age 11, were studied and correlated. No significant relationship was found between the prepubescent growth spurt of either boys or girls and their gains in arithmetic or reading achievement at that time. Rapid growth at adolescence cannot be regarded as a legitimate excuse for poor school work.—S. P. Hayes, Jr. (Mt. Holyoke).

6034. Jaensch, E. Das Wesen der Kindheit und der eidetische Tatsachenkreis. (The nature of childhood and the eidetic apperceptive mass.) *Gesund. u. Erzieh.*, 1935, 48, 194-201.—Among the 12 major psychological premises set forth by the author as a result of his own research and that of others are the following: (1) Research in psychological anthropology has shown that youth, deriving its native powers direct from original life sources and less affected, as yet, by the demoralizing influences of civilization, possesses surer instinctive insights than adults, except such adults as retain their youthful spirit. (2) The discovery of the eidetic apperceptive mass has profound educational implications, since it refutes the old theory that the child is merely an adult in process of development, whereas experiments have proved that the child possesses certain capacities more distinct and powerful than those of the adult, which generally disappear at maturity. The author demonstrated, more than 20 years ago, that eidetic phenomena, previously recognized in exceptional adults (artists, creative workers, etc.) are common to childhood and adolescence, and largely determine the development of the apperceptive mass. This results only from an inner surrender to environmental influences—an environmental coherence. (3) The eidetic phase of unspoiled childhood is the basis of thought and ideals, concepts for the most part depending on visual perception, not on verbal information. (4) In adolescence environmental coherence is transformed into coherence with the human-mental world. The first, so-called "negative" phase of adolescence is a somewhat painful escape from the first coherence phase, prior to the development of the new phase. (5) Organic education demands that every characteristic developmental phase be utilized fully and made to contribute to the total development. Research in eidetics has revealed the close relationship between the eidetic environmental phase of childhood and the genius of the creative artist. This reveals the great

educational possibilities for children along the lines of art, sculpture, music, improvisation, etc., the development of latent productivity combined with a hitherto greatly under-estimated esthetic susceptibility and potentiality. Bibliography.—S. W. Downs (Berkeley).

6035. Karn, M. N. The records of height and weight taken in school medical inspections in the borough of Ealing. *Ann. Eugen., Camb.*, 1935, 6, 214-224.—Data are presented for 12-year-old boys for 11 successive years for the birth period 1909-1919. These data are compared with similar data from the borough of Croydon for the birth period 1916-19. Both studies show constant height for the birth period 1916-1919, but over the entire 11-year period height has increased and is less variable and weight has decidedly increased over the longer period.—J. W. Dunlap (Fordham).

6036. Kempelen, A. Adatok a műveltebb felserdült (adolescens) ifjúság életfelfogásának alakulására vonatkozólag. (Contribution to the philosophical development of cultured adolescents.) *Mag. psychol. Szle*, 1934, 7, No. 1/2, 108-122.—Questionnaires were given to 95 adolescents from cultured homes in Budapest. It was found that between the ages of 17 and 24 the subjects became less extreme in their philosophy and that girls had a decidedly more positive attitude toward life and values than their male contemporaries.—H. Beaumont (Kentucky).

6037. Keogh, C. R. A study of runaways at a state correctional school for boys. *J. juv. Res.*, 1935, 19, 45-61.—The trends among 200 boys who during a five-year period had run away at least once from the Whittier School, a correctional school, did not differ essentially in the following respects from those among 400 consecutive cases admitted to Whittier and used as controls: IQ, age, race (white and Mexican, at least), parental occupation, and distance of home from the school. The runaways, constituting 17.29% of the Whittier population, tended to escape from the institution only once. 50% made their exits within 6 months of their admission to the school. More disappearances occurred in the fall than during any other season. The runaway group as compared with the controls showed a higher incidence of (1) broken homes, (2) step-parents, (3) a record of school truancy, and (4) a history of running away from home. The post-institutional adjustment of the former group tended to be less satisfactory than that of the average Whittier boy.—H. L. Koch (Chicago).

6038. Levy, D. M., & Tulchin, S. H. On the problem of "all fours" locomotion. *J. genet. Psychol.*, 1935, 47, 193-203.—It is argued that walking on all fours, far from being, as Hrdlička has said, a weakened inheritance from the prehuman past, is explained more rationally by (1) spasticity of the legs, or as (2) a transition stage between creeping and walking, or possibly (3) regressive return from walking to creeping. Individual examples are analyzed, as well

as tabular data from better baby contests.—*J. F. Dashiell* (North Carolina).

6039. Liss, E. Libidinal fixations as pedagogic determinants. *Amer. J. Orthopsychiat.*, 1935, 5, 126-131.—Children with oral libidinalizations, manifested in idiosyncrasies to food or nursing at early stages, frequently exhibit upper respiratory infections, and when they enter school, where the oral region is brought into the foreground, they often exhibit (passive type) hesitation of speech, limited vocabulary or inadequate articulation and (aggressive type) stammering, stuttering or compulsive speech. Due to the nature of the involvement verbal analysis fails, but various play techniques are useful in treatment.—*J. McV. Hunt* (Worcester State Hospital).

6040. Louttit, C. M. Family harmony and the child. *Ind. Univ. Sch. Educ. Bull.*, 1935, 11, No. 4, 126-130.—Marital stability must be based upon harmony between the parents. Where such a situation does not obtain desirable behavioral and personality development of the children is seriously interfered with.—*C. M. Louttit* (Indiana).

6041. Lurie, L. A. Endocrinology and behavior disorders of children. A study of the possible causal relationships between endocrinopathic states and behavior disorders of children. *Amer. J. Orthopsychiat.*, 1935, 5, 141-153.—20% of the first 1000 children studied at the Child Guidance Home (Cincinnati, O.) exhibited various glandular disturbances. In 9.3%, there appeared a direct causal relationship between the behavior disorder and the endocrine disturbance. The pituitary gland was most often involved (46% of endocrine cases), and frequently in cases of stealing. Next most often involved was the thyroid gland, where the commonest symptom was mental retardation, but where speech disorders, motor restlessness, and destructiveness were also exhibited. 71 children received glandular therapy. In 33% the results were good, in 50% they were fair, and in 17% they were poor. In evaluating the power of an endocrine disorder to produce a behavior disorder, both its direct (e.g., mental retardation associated with myxedema) and its indirect (emotional conflicts produced in the child as a result of his attitude to the abnormal physical condition produced by the endocrine disturbance) effects must be considered. In illustrative cases social therapy was combined with treatment of the endocrine disturbance.—*J. McV. Hunt* (Worcester State Hospital).

6042. Lurie, L. A. The medical approach to the study of behavior disorders of children. A critical analysis of one thousand cases studied at the Child Guidance Home (Cincinnati, O.). *Amer. J. Psychiat.*, 1935, 91, 1380-1388.—The cases were collected over a period of 12 years; the children ranged in age from 4 to 18 years. The underlying causative factors were found to be endogenous or psychophysical in 49% of the cases; exogenous or environmental causes were found in 23%, and in the remaining 28% both endogenous and exogenous factors were responsible for the behavior difficulties. 75% of the cases

from the endogenous group were organic in nature. The medical approach in child guidance should be stressed; the psychological approach and psychotherapy have been indicated in a relatively few cases. On psychometric tests, 15.7% were definitely feeble-minded, 17.8% borderline, 22.5% of subnormal intelligence, and 44% were either normal or superior in intelligence.—*R. Goldman* (Clark).

6043. Mallay, H. The latent memory span of the preschool child. *Child Develpm.*, 1935, 6, 110-119.—Individual experiments were performed with 18 nursery-school children to determine the longest interval after which they could recall without error the solution to puzzle boxes of varying degrees of difficulty. The children acquired the method of opening the boxes sometimes by demonstration with verbal instructions, sometimes by demonstration alone, and sometimes by trial-and-error learning. Results indicate that latent memory spans increased with age, and that the actual interval of recall "seemed to be dependent on the complexity of the problem, on the method by which achievement was accomplished, and on the personality characteristics and methods of work of the individual."—*F. D. McTeer* (Wayne University).

6044. Markey, F. V. Imaginative behavior of young children. *Child Develpm. Monogr.*, 1935, No. 18. Pp. xvi + 139.—The imaginative behavior of 54 children, aged 22 to 48 months, and representing three different preschool groups, was studied by means of a modified diary technique during 10 15-minute periods of observation of each child during his free play. Supplementary data were obtained in two controlled situations; one made use of blocks (89 subjects) and the other of a "housekeeping game" (50 subjects). The usual procedures in testing the reliability of the sampling, of the observer, and of the criteria used in classifying and "scoring" imaginative responses were observed. The results portray some of the changes that come with age in the frequency and complexity of children's make-believe. Additional specific findings: a young child is likely to exhibit more imaginative behavior if he associates with older children than if he associates only with children of his own age; there were no consistent or reliable sex differences; the imaginative play of children of lower socio-economic status was somewhat more "prosaic" than the play of children of higher status; imaginative behavior correlated somewhat more highly with MA than with CA. Correlations between the three divisions of the study were low: to obtain an adequate picture of imaginative behavior at a given age it is not enough to depend upon observation of free play alone, or upon specific experimental techniques; it is necessary, rather, to use a variety of approaches; moreover, the same test of imagination is not equally valid at all age levels, by reason of changes in the child's interests and understanding, and conclusions regarding changes with age are likely to be spurious if based upon a single test or technique. The author also discusses findings that have educational implications.—*A. T. Jersild* (Columbia).

6045. Mayer, B. A. Negativistic reactions of preschool children on the new revision of the Stanford-Binet. *J. genet. Psychol.*, 1935, 46, 311-334.—In a study of 277 preschool children age was found to be the most important factor in relation to negativism in responding to the tests. Between 2 and 4½ years it remained fairly constant, except for a high peak at 3 and a lower one at 4. More passive at the youngest ages, negativism became more active with older children but at the same time more easily overcome. No sex difference was clearly revealed. The greatest frequency of negativistic response on any one test was 31% of all times it was administered. Tests demanding a verbal response, and most especially those to a verbal stimulus, were most likely to elicit N-R. No relationship was found between the difficulty of a test and negativism toward it. N-R was less frequent on a second testing occasion. The less resistive children made a higher mean score than the more resistive, but which variable influences the other is not clear.—J. F. Dashiell (North Carolina).

6046. McGraw, M. B. Growth: a study of Johnny and Jimmy. (Preface by F. Tilney; introduction by J. Dewey.) New York: Appleton-Century, 1935. Pp. 319. \$3.50.—The author presents an extensive analysis of the principles of development as well as factual data on the development of Johnny and Jimmy, identical twins studied from birth to an age of some 2 years. Some use is also made of the findings on 66 other infants. The chief experiment was designed to show the influence of much vs. little exercise on the development of phylogenetic and ontogenetic behavior. To this end Johnny, the least advanced twin, was exercised much and Jimmy little. From the interpretive side, the author seeks principles that are involved in all development from the cellular stage on. Emphasis is laid on the longitudinal method and on the fact that different behavior mechanisms develop at different and overlapping times. Conditioned-reflex studies deal with the modification of matured forms of response rather than with the appearance of new modes of behavior. The phylogenetic responses studied are the Moro reflex, suspension-grasp, inverted suspension, crawling and creeping, erect locomotion, sitting, erect posture, rolling over, reaching-prehensile reactions, rotation, and reactions to cutaneous irritations. In these reactions little effect was seen of the increased exercise given Johnny in these forms of behavior. In contrast, exercise greatly affected the following ontogenetic activities: swimming, diving, ascending and descending inclines, getting off stools, skating, jumping, and the manipulation of stools and boxes. There is also a discussion of attitudes and associational activities, including language. In connection with ontogenetic activities the author says: "Each aspect of a behavior-pattern may manifest a general diffuse phase at its inception. . . . This partial pattern, however, gradually becomes more and more expansive until it is perhaps exaggerated in form. Presently there appears another aspect of the pattern, the development of which curtails the exaggeration of the former. Finally, the excess activity is eliminated until the essences of

both aspects of the action-system become integrated. Therefore, development in behavior embraces both a process of narrowing down the activity to minimum essentials and a process of knitting together or integrating two or more aspects of a particular behavior-pattern."—W. S. Hunter (Clark).

6047. Mirenva, A. N. Psychomotor education and the general development of preschool children: experiments with twin controls. *J. genet. Psychol.*, 1935, 46, 433-454.—The poorer member of each of four identical twin pairs, aged 4 to 4½ years, was given training for 4½ months in a kindergarten observational clinic in (1) jumping into the air, (2) hitting a mark by throwing a ball, and (3) hitting a mark by rolling a ball. The trained twin showed greater improvement between initial and final tests than did the control, especially in performances (2) and (3). This is contrasted with Gesell's finding, and attention is called to the difference in age of children studied and in number of pairs. Changes in general behavior—initiative, interest in score, quietness, and others—were marked in the experimental twins.—J. F. Dashiell (North Carolina).

6048. Myers, T. R. Intra-family relationships and pupil adjustment. *Teach. Coll. Contrib. Educ.*, 1935, No. 651. Pp. v + 115.—A questionnaire of 114 items was developed to measure the various factors of home environment of high school pupils. A reliability coefficient (split-half) of .91 is reported. Data on the validity of the questionnaire are presented. The questionnaire was given to 218 pupils in grades 7 and 8 and to 393 pupils in grades 9 to 12. The teachers rated the pupils as poorly adjusted, normal, well adjusted. The replies to each question for each teacher-designated group are given. A comparison between the scores on this questionnaire and those on the Symonds Adjustment Questionnaire for the senior high school pupils is made. The correlation ( $N = 393$ ) of total scores is .47. Other relationships are given. No relationship with scholarship was found. An additional questionnaire was submitted to parents, teachers, and parent education workers to determine what specific home factors were believed to be associated with poor adjustment. The opinions of the group were compared with the results of the study. Points of agreement and challenge are given. Unquestioning obedience demanded by parents was found in the study to be associated with good adjustment of younger children and poor adjustment of older ones. The opinion of the workers was that the practice led to bad adjustment. Implications of the findings are suggested. The two questionnaires are given. The bibliography lists 37 titles.—J. M. Stalnaker (Chicago).

6049. Peck, L., & Walling, R. A preliminary study of the eidetic imagery of preschool children. *J. genet. Psychol.*, 1935, 47, 168-192.—20 children aged 24 to 64 months were tested with two series of stimulus pictures and objects. In the two series 55% and 85% of the children reported after-images, while 50% in each series reported eidetic images (the same individuals in the latter cases). In regard to eidetic

images, correlations were high between duration and number of details and between eidetic tests and both chronological age and mental age. This study demonstrates that the technique of testing for eidetic imagery can be adapted to preschool subjects and that the results are reliable.—*J. F. Dashiell* (North Carolina).

**6050. Ricciardi, P.** Summarizing the parent interview in a child guidance clinic. *J. juv. Res.*, 1935, 19, 146-159.—The author gives a description of a "Summary Card and Parent Rating Schedule" which she has developed and which she offers not as a substitute for the elaborate social history of a case but as a convenient device for summarizing interviews with parents. Considerable experimentation with the instrument by a number of competent interviewers was performed before it was cast into its present form. The form includes a five-point rating scale for 19 traits or items which tend to be taken into consideration frequently by those interviewing parents, as well as a schedule for making notations regarding the major points in a case, the recommendations offered, and the extent to which these were carried out. Several interviewers using the rating scale seemed to agree well in their judgments, the average difference in their ratings on an item being .46 of a scale step.—*H. L. Koch* (Chicago).

**6051. Schilder, P., & Wechsler, D.** What do children know about the interior of the body? *Int. J. Psycho-Anal.*, 1935, 16, 355-360.—A systematic inquiry with 40 children from 4 to 13 years old was made to ascertain the extent of their knowledge of the interior of their bodies. The questioning method and the answers obtained are cited in a number of instances. Children with a mental age of 11 gave correct answers. The typical answer of the younger children concerned recently eaten food. A comparison is drawn between the childish answer and the frequent experiences of certain melancholics. The general conclusion drawn is that to the infantile mind the body contains material taken from the outside.—*M. H. Erickson* (Eloise Hospital).

**6052. Simson, T. P.** [Concerning the problem of the so-called psychoneuroses of children. (Pathological development of personality in childhood.)] *Trud. ukr. Syezda Nevropat. Psichiat.*, 1935, 800-808.—States of pathological development of the personality under the influence of traumatizing situations arise in children more easily and quickly than in adults. The age of 2-4 years presents the most favorable conditions for them. The hysterical, asthenic,

schizoid and epileptoid forms of pathological development were observed by the author. Some prophylactic measures are suggested.—*A. Yarmolenko* (Leningrad).

**6053. Sterba, S. E.** Aus der Analyse eines Zweijährigen. (From the analysis of a two-year-old.) *Z. psychoanal. Pädag.*, 1934, 8, 37-72.—*R. R. Wiloughby* (Clark).

**6054. Wunderling, R. L.** Kind und Rätsel. (Child and puzzle.) Frankfurt a. M.: Moritz, Diesterweg, 1935. Pp. 78. RM. 2.40.—Various types of puzzles were given to children from the 1st to the 8th grade. The responses of the children were either (1) positive, (2) negative, or (3) different from the expected way of solving the problem. The third type of response gave interesting insights into the dynamics of thinking in children.—*R. L. Wunderling* (Frankfurt a. M.)

**6055. Zanker, A.** Pediatrics and individual psychology. *Int. J. indiv. Psychol.*, 1935, 1, 70-85.—Part I: 150 cases from a child clinic are analyzed and classified according to individual-psychology types, age and traditional specific neurotic phenomena. Part II presents a series of cases to prove that social experiences are a more potent factor in the development of maladjustments in children than are abstractly conceived somatic defects, whether inherited or acquired. The article closes with a consideration of cases of both organic and behavior disturbances which are based on true organic defects. A thorough medical examination is deemed advisable for all behavior cases, especially those involving more or less sudden character changes.—*O. N. de Weerd* (Beloit).

**6056. Zeligs, R., & Hendrickson, G.** Factors regarded by children as the basis of their racial attitudes. *Sociol. soc. Res.*, 1935, 19, 225-233.—Analyzing the results from fifteen elaborate interviews with children in the sixth grade, the authors show that the attitude assumed with regard to races familiar to the children through personal experience appeared to be dependent almost exclusively upon these personal relationships, and to be untouched by any general principles or ideals regarding racial differences. Where the children had had no direct personal contacts, judgments were based on such externals of racial differences as the quaintness or grotesqueness of the customs and costumes of a people.—*J. R. Hilgard* (Stanford).

[See also abstracts 5507, 5517, 5581, 5590, 5605, 5611, 5672, 5681, 5716, 5734, 5744, 5779, 5782, 5809, 5812, 5847, 5933, 5934, 5958, 6015.]

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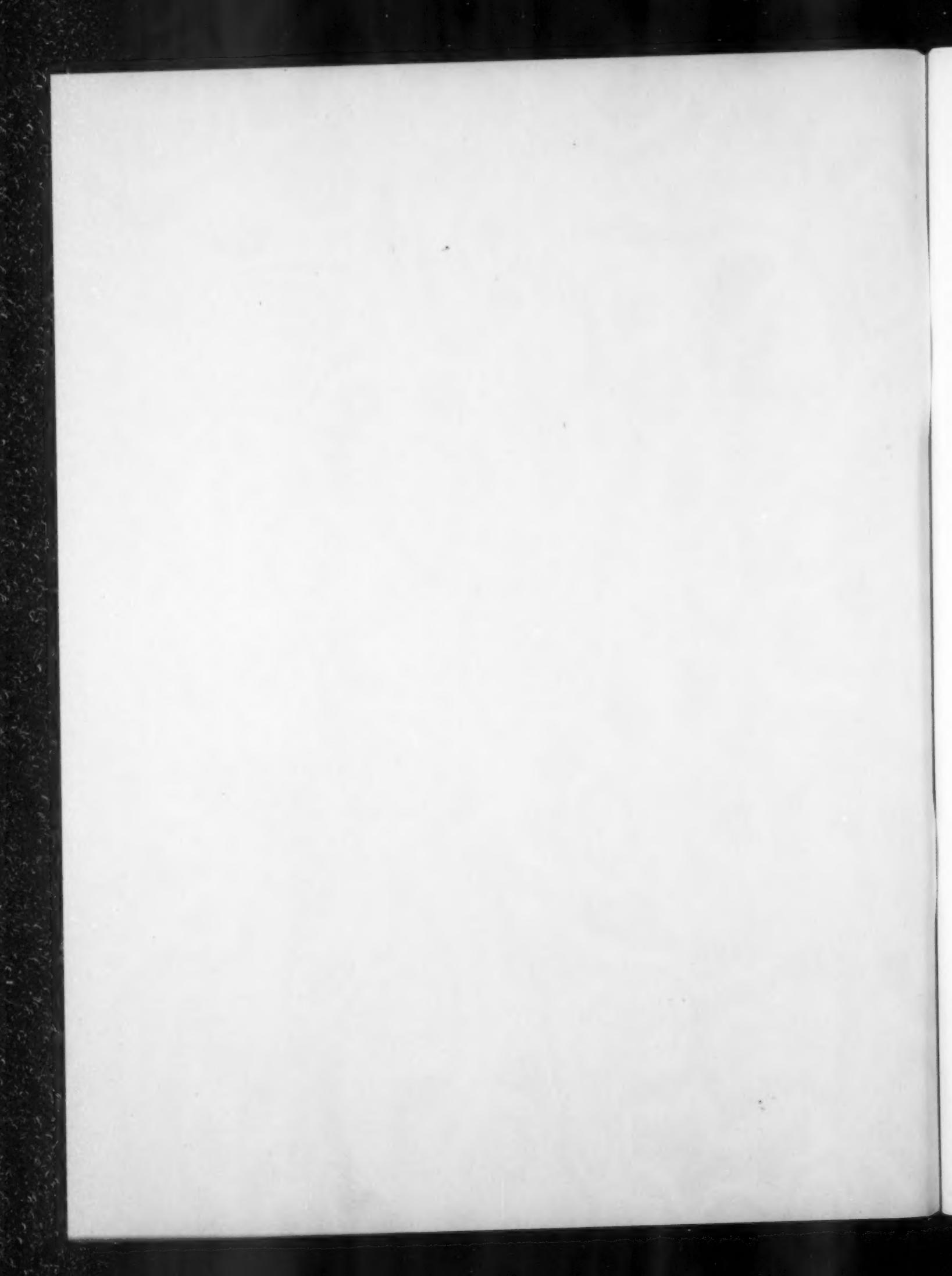
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